

FIGURE 1-1

S K R Q A Q M V Q P Q S P V
 GAAG AGC AAG AGG CAG GCT CAG CAA ATG GTT CAG CCC CAG TCC CCG GTC
 1 5 10 15 49

A V S Q S K P G C Y D N G K H Y
 CCT GTC AGT CAA AGC AAG CCC GGT TGT TAT GAC AAT GGA AAA CAC TAT
 20 25 30 97

 Q I N Q W E R T Y L G N V L V
 CAG ATA AAT CAA CAG TGG GAG CGG ACC TAC CTA GGT AAT GTG TTG GTT
 35 40 45 145 1/86

C T C Y G G S R G F N C E S K P
 TGT ACT TGT TAT GGA GGA AGC CGA GGT TTT AAC TGC GAA AGT AAA CCT
 50 55 60 193

E A E E T C F D K Y T G N T Y R
 GAA GCT GAA GAG ACT ACT TGC TTT GAC AAG TAC ACT GGG AAC ACT TAC CGA
 65 70 75 241

V G D T Y E R P K D S M I W D C
 GTC GGT GAC ACT TAT GAG CCT CCT AAA GAC TCC ATG ATC TGG GAC TGT
 80 85 90 95 289

FIGURE 1-2

T	C	I	G	A	G	R	G	R	I	S	C	T	I	A	N
ACC	TGC	ATC	GGG	GCT	GGG	CGA	GGG	AGA	ATA	AGC	TGT	ACC	ATC	GCA	AAC
100															337
R	C	H	E	G	G	Q	S	Y	K	I	G	D	T	W	R
CGC	TGC	CAT	GAA	GGG	GGT	CAG	TCC	TAC	AAG	ATT	GGT	GAC	ACC	TGG	AGG
115															385
R	P	H	E	T	G	G	Y	M	L	E	C	V	C	L	G
AGA	CCA	CAT	GAG	ACT	GGT	GGT	TAC	ATG	TTA	GAG	TGT	GTG	TGT	CTT	GGT
130															433
N	G	K	G	E	W	T	C	K	P	I	A	E	K	C	F
AAT	GGG	AAA	GGA	GAA	TGG	ACC	TGC	AAG	CCC	ATA	GCT	GAG	AAG	TGT	TTT
145															481
D	H	A	A	G	T	S	Y	V	V	G	E	T	W	E	K
GAT	CAT	GCT	GCT	GGG	ACT	CCC	TAT	GTG	GTC	GGA	GAA	ACG	TGG	GAG	AAG
160															529
															175

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FIGURE 1-3

P	Y	Q	G	W	M	M	V	D	C	T	C	L	G	E	G
CCC	TAC	CAA	GGC	TGG	ATG	ATG	GAT	TGT	ACT	TGC	CTG	GGA	GAA	GGC	577
S	G	R	I	T	C	T	S	R	N	R	C	N	D	Q	D
AGC	GGG	CGC	ATC	ACT	TGC	ACT	TCT	AGA	AAT	AGA	TGC	AAC	GAT	CAG	625
T	R	T	S	Y	R	I	G	D	T	W	S	K	K	D	N
ACA	AGG	ACA	TCC	TAT	AGA	ATT	TGA	GAC	ACC	TGG	AGC	AAG	AAG	GAT	AT
R	G	N	L	Q	C	I	C	T	G	N	G	R	G	E	
CGA	GGG	AAC	CTG	CTC	CAG	TGC	ATC	TGC	ACA	GGC	AAC	GGC	CGA	GGA	GAG
															721
W	K	C	E	R	H	T	S	V	Q	T	T	S	S	G	S
TGG	AAG	TGT	GAG	AGG	CAC	ACC	TCT	GTG	CAG	ACC	ACA	TCG	AGC	GGA	TCT
															769
G	P	F	T	D	V	R	A	A	V	Y	Q	P	Q	P	H
GGC	CCC	TTC	ACC	GAT	GTT	CGT	GCA	GCT	GTT	TAC	CAA	CCC	CAG	CCT	CAC
															817

D 94 92 97 1 - 0 1 2 7 0 0

FIGURE 1-4

P	Q	P	P	Y	G	H	C	V	T	D	S	G	V	V		
CCC	CAG	CCT	CCC	TAT	GGC	CAC	TGT	GTC	ACA	GAC	AGT	GGT	GTG	GTC	865	
275																
Y	S	V	G	M	Q	W	L	K	T	Q	G	N	K	Q	M	
TAC	TCT	GTG	GGG	ATG	CAG	TGC	TTC	AAG	ACA	CAA	GGA	AAT	AAG	CAA	ATG	913
290																
L	C	T	C	L	G	N	G	V	S	C	Q	E	T	A	V	
CCT	TGC	ACG	TGC	CTG	GGC	AAC	GGA	GTC	AGC	TGC	CAA	GAG	ACA	GCT	GTA	961
305																
T	Q	T	Y	G	G	N	L	N	G	E	P	C	V	L	P	
ACC	CAG	ACT	TAC	GCT	GGC	AAC	TTA	AAAT	GGA	GAG	CCA	TGT	GTC	TTA	CCA	1009
320																
F	T	Y	N	G	R	T	F	Y	S	C	T	T	E	G	R	
TTC	ACC	TAC	AAT	GGC	AGG	ACG	TTC	TAC	TCC	TGC	ACC	ACG	GAA	GGG	CGA	1057
340																
345																
350																

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FIGURE 1-5

Q	D	G	H	L	W	C	S	T	T	S	N	Y	E	Q	D	1105
CAG	GAC	GGA	CAT	CTT	TGG	TGC	AGC	ACA	ACT	TCG	AAT	TAT	GAG	CAG	GAC	
																355
																360
																365
Q	K	Y	S	F	C	T	D	H	T	V	L	V	Q	T	Q	1153
CAG	AAA	TAC	TCT	TTC	TGC	ACA	GAC	CAC	ACT	GTT	TTC	GTT	CAG	ACT	CAA	
																370
																375
G	G	N	S	N	G	A	L	C	H	F	P	F	L	Y	N	1201
GCA	GGA	AAT	TCC	AAT	GGT	GCC	TTC	TGC	TTC	CCC	TTC	CTA	TAC	AAC		5/86
																380
																385
N	H	N	Y	T	D	C	T	S	E	G	R	R	D	N	M	1249
AAC	CAC	AAT	TAC	ACT	GAT	TGC	ACT	TCT	GAG	GGC	AGA	AGA	GAC	AAC	ATG	
																390
																395
N	H	N	Y	T	D	C	T	S	E	G	R	R	D	N	M	1249
AAC	CAC	AAT	TAC	ACT	GAT	TGC	ACT	TCT	GAG	GGC	AGA	AGA	GAC	AAC	ATG	
																400
																405
K	W	C	G	T	T	Q	N	Y	D	A	D	Q	K	F	G	1297
AAG	TGG	TGT	GGG	ACC	ACA	CAG	AAC	TAT	GAT	GCC	GAC	CAG	AAG	TTT	GGG	
																410
																415
K	W	C	G	T	T	Q	N	Y	D	A	D	Q	K	F	G	1297
AAG	TGG	TGT	GGG	ACC	ACA	CAG	AAC	TAT	GAT	GCC	GAC	CAG	AAG	TTT	GGG	
																420
																425
F	C	P	M	A	A	H	E	E	I	C	T	T	N	E	G	1345
TTC	TGC	CCC	ATG	GCT	GCC	CAC	GAC	GAA	ATC	TGC	ACA	ACC	AAT	GAA	GGG	
																430
																435
																440
																445

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FIGURE 1-6

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V	M	Y	R	I	G	D	Q	W	D	K	Q	H	D	M	G
GTC	ATG	TAC	CGC	ATT	GGG	GAT	CAG	TGG	GAT	AAG	CAG	CAT	GAC	ATG	GGT
450															
H	M	M	R	C	T	C	V	G	N	G	R	G	E	W	T
CAC	ATG	ATG	AGG	TGC	ACG	TGT	GTT	GGG	AAT	GGT	CGT	GGG	GAA	TGG	ACA
465															
C	I	A	Y	S	Q	L	R	D	Q	C	I	V	D	D	I
TGC	ATT	GCC	TAC	TCG	CAA	CTT	CGA	GAT	CAG	TGC	ATT	GTT	GAT	GAC	ATC
480															
T	Y	N	V	N	D	T	F	H	K	R	H	E	E	G	H
ACT	TAC	AAT	GTG	AAC	GAC	ACA	TTC	CAC	AAG	CGT	CAT	GAA	GAG	GGG	CAC
500															
M	L	N	C	T	C	F	G	Q	G	R	G	R	W	K	C
ATG	CTG	AAC	TGT	ACA	TGC	TTC	GGT	CAG	GGT	CGG	GGC	AGG	TGG	AAG	TGT
515															

FIGURE 1-7

D P V D Q C Q D S E T G T F Y Q
 GAT CCC GTC GAC CAA TGC CAG GAT TCA GAG ACT GGG ACG TTT TAT CAA 1633
 530 535 540 545

 I G D S W E K Y V H G V R Y Q C
 ATT GGA GAT TCA TGG GAG AAG TAT GTG CAT CGT GTC AGA TAC CAG TGC 1681
 550 555

 Y C Y C R G I G E W H C Q P L Q
 TAC TGC TAT GGC CGT GGC ATT GGG GAG TGG CAT TGC CAA CCT TTA CAG 1729
 560 565 570 575

 T Y P S S G P V E V F I T E T
 ACC TAT CCA AGC TCA AGT GGT CCT GTC GAA GTA TTT ATC ACT GAG ACT 1777
 580 585

 P S Q P N S H P I Q W N A P Q P
 CCG AGT CAG CCC AAC TCC CAC CCC ATC CAG TGG AAT GCA CCA CAG CCA 1825
 590 595 600 605

 S H I S K Y I L R W R P K N S V
 TCT CAC ATT TCC AAG TAC ATT CTC AGG TGG AGA CCT AAA AAT TCT GTA 1873
 610 615 620

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FIGURE 1-8

G	R	W	K	E	A	T	I	P	G	H	L	N	S	Y	T	1921
GGC	CGT	TGG	AAG	GAA	GCT	ACC	ATA	CCA	GGC	CAC	TTA	AAC	TCC	TAC	ACC	
625																
I	K	G	L	K	P	G	V	V	Y	E	G	Q	L	I	S	1969
ATC	AAA	GGC	CTG	AAG	CCT	GGT	GTG	GTA	TAC	GAG	GGC	CAG	CRC	ATC	AGC	
640																
I	Q	Q	Y	G	H	Q	E	V	T	R	F	D	F	T	T	2017
ATC	CAG	CAG	TAC	GGC	CAC	CAA	GAA	GTG	ACT	CGC	TTT	GAC	TTC	ACC	ACC	
660																
T	S	T	S	T	P	V	T	S	N	T	V	T	G	E	T	2065
ACC	AGC	ACC	AGC	ACA	CCT	GTG	ACC	AGC	AAC	ACC	GTG	ACA	CGA	GAG	ACG	
675																
T	P	F	S	P	L	V	A	T	S	E	S	V	T	E	I	2113
ACT	CCC	TTT	TCT	CCT	CTT	GTG	GCC	ACT	TCT	GAA	TCT	GTG	ACC	GAA	ATC	
690																
															00/86	

FIGURE 1-9

T	A	S	S	F	V	V	S	W	V	S	A	S	D	T	V	
ACA	GCC	AGT	AGC	TTT	GTG	GTG	GTC	TCC	TGG	GTC	TCA	GCT	TCC	GAC	ACC	GTG
705	710	715														2161
S	G	F	R	V	E	Y	E	L	S	E	E	G	D	E	P	
TCG	GGG	TTC	CGG	GTG	GAA	TAT	GAG	CTG	AGT	GAG	GGA	GAT	GAG	CCA		
720	725															2209
Q	Y	L	D	L	P	S	T	A	T	S	V	N	I	P	D	
CAG	TAC	CTG	GAT	CTT	CCA	AGC	ACA	GCC	ACT	TCT	GTG	AAC	ATC	CCT	GAC	
740	745															2257
L	L	P	G	R	K	Y	I	V	N	V	Y	Q	I	S	E	
CTG	CTT	CCT	GGC	CGA	AAA	TAC	ATT	GTA	AAT	GTC	TAT	CAG	ATA	TCT	GAG	
755																2305
D	G	E	Q	S	L	I	L	S	T	S	Q	T	T	A	P	
GAT	GGG	GAG	CAG	ACT	TTG	ATC	CTG	TCT	ACT	TCA	CAA	ACA	ACA	GGG	CCT	
770	775															2353
D	A	P	P	D	P	T	V	D	Q	V	D	D	T	S	I	
GAT	GCC	CCT	CCT	GAC	CCC	ACT	GTG	GAC	CAA	GAT	GAT	GAC	ACC	TCA	ATT	
785	790															2401

FIGURE 1-10

V V R W S R P Q A P I T G Y R I
 GTR GTR CGC TGG AGC AGA CCC CAG GCT CCC ATC ACA GGG TAC AGA ATA
 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900

V Y S P S V E G S S T E L N L P
 GTC TAT TCG CCA TCA GTA GAA GGT AGC AGC ACA GAA CTC AAC CTT CCT
 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900

E T A N S V T L S D L Q P G V Q
 GAA ACT GCA AAC TCC GTC ACC CTC AGT GAC TTG CAA CCT GGT GTR CAG
 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900

Y N I T I Y A V E E N Q E S T P
 TAT AAC ATC ACT ATC TAT GCT GTG GAA AAT CAA GAA AGT ACA CCT
 840 845 850 855 860 865 870 875 880 885 890 895 900

V V I Q Q E T T G P R S D T V
 GTT GTC ATT CAA CAA GAA ACC ACT GGC ACC CCA CGC TCA GAT ACA CTC
 850 855 860 865 870 875 880 885 890 895 900

10/86 2449 2497 2545 2593 2641

FIGURE 1-11

T I M W T P P E S A V T G Y R V
ACC ATC ATG TGG ACA CCC CCT GAG AGT GCA GTG ACC GGC TAC CGT GTG
900 905 910

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D	V	I	P	V	N	L	P	G	E	H	G	Q	R	L	P
GAT	GTG	ATC	CCC	GTC	AAC	CTG	CCT	GGC	GAG	CAC	GGG	CAG	AGG	CTG	CCC

6
1

5

1

FIGURE 1-12

Q	F	V	N	E	T	D	S	T	V	L	V	R	W	T	P
CAG	TTT	GTC	AAT	GAA	ACT	GAT	TCT	ACT	GTC	CTG	GTG	AGA	TGG	ACT	CCA
980															2977

P	R	A	Q	I	T	G	Y	R	L	T	V	G	L	T	R
CCT	CGG	GCC	CAG	ATA	ACA	GGG	TAC	CGA	CTG	ACC	GTG	GCC	CTT	ACC	CGA
995															1005

R	G	Q	P	R	Q	Y	N	V	G	P	S	V	S	K	Y
AGA	GGC	CAG	CCC	AGG	CAG	TAC	AAT	GTG	GGT	CCC	TCT	GTC	TTC	AAG	TAC
1010															1020

P	L	R	N	L	Q	P	A	S	E	Y	T	V	S	L	V
CCC	CTG	AGG	AAT	CTG	CAG	CCT	GCA	TCT	GAG	TAC	ACC	GTA	TCC	CTC	GTG
1025															1035

A	I	K	G	N	Q	E	S	P	K	A	T	G	V	F	T
GCC	ATA	AAG	GGC	AAC	CAA	GAG	AGC	CCC	AAA	GCC	ACT	GTC	TTT	ACC	1055
1040															3169

FIGURE 1-13

T L Q P G S S
 ACA CTC CAG CCT GGG AGC TCT ATT CCA CCT TAC AAC ACC GAG GTG ACT
 1060 1065 1070

E T I V I T W T P A P R I G F
 GAG ACC ACC ATC GTG ATC ACA TGG ACG CCT GCT CCA AGA ATT GGT TTT
 1075 1080 1085

K L G V R P S Q G G E A P R E V
 AAG CTG GGT GTA CGA CCA AGC CAG GGA GAG GCA CCA CGA GAA GTG
 1090 1095 1100

T S D S G S I V V S G L T P G V
 ACT TCA GAC TCA GGA AGC ATC ATC GTT GTG TCC GGC TTG ACT CCA GGA GAA
 1105 1110 1115

E Y V Y T I Q V L R D G Q E R D
 GAA TAC GTC TAC ACC ATC CAA GTC CTC AGA GAT GGA CAG GAA AGA GAT
 1120 1125 1130 1135

A P I V N K V V T P L S P P T N
 GCG CCA ATT GTA AAC AAA GTC GTG ACA CCA TTG TCT CCA CCA ACA AAC
 1140 1145 1150

FIGURE 1-14

L	H	L	E	A	N	P	D	T	G	V	L	T	V	S	W	3505
TTC	CAT	CTG	GAG	GCA	AAC	CCT	GAC	ACT	GCA	GTG	CTC	ACA	GTC	TCC	TGG	1155
E	R	S	T	T	P	D	I	T	G	Y	R	I	T	T	T	3553
GAG	AGG	AGC	ACC	CCA	GAC	ATT	ACT	GGT	TAT	AGA	ATT	ACC	ACA	ACC	1165	
P	T	N	G	Q	Q	G	N	S	L	E	E	V	V	H	A	3601
CCR	ACA	AAC	GGC	CAG	CAG	GGC	AAT	TCT	TTG	GAA	GAA	GTG	GTC	CAT	GCT	1170
D	Q	S	S	C	T	F	D	N	L	S	P	G	L	E	Y	3649
GAT	CAG	AGC	TCC	TGC	ACT	TTT	GAT	AAC	CTG	AGT	CCC	GGC	CTG	GAG	TAC	1175
N	V	S	V	Y	T	V	K	D	K	E	S	V	P	I	3697	
AAT	GTC	AGT	GTT	TAC	ACT	GTC	AAG	GAT	GAC	AAG	GAA	AGT	GTC	CCT	ATC	1180
D	Q	S	S	C	T	F	D	N	L	S	P	G	L	E	Y	1215
GAT	CAG	AGC	TCC	TGC	ACT	TTT	GAT	AAC	CTG	AGT	CCC	GGC	CTG	GAG	TAC	1220
N	V	S	V	Y	T	V	K	D	K	E	S	V	P	I	1230	
AAT	GTC	AGT	GTT	TAC	ACT	GTC	AAG	GAT	GAC	AAG	GAA	AGT	GTC	CCT	ATC	1225

FIGURE 1-15

S	D	T	I	I	P	A	V	P	P	T	D	L	R	F
TCT	GAT	ACC	ATC	ATC	CCA	GCT	GTT	CCT	CCC	ACT	GAC	CTG	CGA	TTC
1235														3745
T	N	I	G	P	D	T	M	R	V	T	W	A	P	P
ACC	AAC	ATT	GGT	CCA	GAC	ACC	ATG	CGT	GTC	ACC	TGG	GCT	CCA	CCC
1250														3793
S	I	D	L	T	N	F	L	V	R	Y	S	P	V	N
TCC	ATT	GAT	TTA	ACC	AAC	TTC	CTG	GTG	CGT	TAC	TCA	CCT	GTG	AAA
1265														3841
E	E	D	V	A	E	L	S	I	S	P	S	D	N	V
GAG	GAA	GAT	GTT	GCA	GAG	TTG	TCA	ATT	TCT	CCT	TCA	GAC	AAT	GCA
1280														3889
V	L	T	N	L	L	P	G	T	E	Y	V	S	V	S
GTC	TTA	ACA	AAT	CTC	CTG	CCT	GGT	ACA	GAA	TAT	GTA	GTG	AGT	GTC
1300														3937
S	V	Y	E	Q	H	E	S	T	P	L	R	G	R	K
AGT	GTC	TAC	GAA	CAA	CAT	GAG	AGC	ACA	CCT	CTT	AGA	GGA	AGA	CAG
1315														3985

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FIGURE 1-16

T G L D S P T G I D F S D I T A
 ACA GGT CTT GAT TCC CCA ACT GGC ATT GAC TTT TCT GAT ATT ACT GCC 4033
 1330 1335 1340

N S F T V H W I A P R A T I T G
 AAC TCT TTT ACT GTG CAC TGG ATT GCT CCT CGA GCC ACC ATC ACT GGC 4081
 1345 1350 1355

Y R I R H H P E H F S G R P R E
 TAC AGG ATC CGC CAT CAT CCC GAG CAC TTC AGT GGG AGA CCT CGA GAA 4129
 1360 1365 1370 1375

D R V P H S R N S I T L T N L T
 GAT CGG GTG CCC CAC TCT CGG AAT TCC ATC ACC CTC ACC AAC CTC ACT 4177
 1380 1385 1390

P G T E Y V V S I V A L N G R E
 CCA GGC ACA GAG TAT GTC GTC AGC ATC GTT GCT CTT AAT GGC AGA GAG 4225
 1395 1400 1405

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FIGURE 1-17

E	S	P	L	I	G	Q	S	T	V	S	D	V	P		
GAA	AGT	CCC	TTA	TTG	ATT	GGC	CAA	CAA	TCA	ACA	GTT	TCT	GAT	GTT	CCG
1410														4273	
R	D	L	E	V	V	A	A	T	P	T	S	L	I	S	
AGG	GAC	CTG	GAA	GTT	GTT	GCT	GGC	ACC	CCC	ACC	AGC	CTA	CTG	ATC	AGC
1425														4321	
W	D	A	P	A	V	T	V	R	Y	R	I	T	Y	G	
TGG	GAT	GCT	CCT	GCT	GTC	ACA	GTG	AGA	TAT	TAC	AGG	ATC	ACT	TAC	GGA
1440														1455	
E	T	G	G	N	S	P	V	Q	E	F	T	V	P	G	S
GAA	ACA	GGA	GGA	AAT	AGC	CCT	GTC	CAG	GAG	TTC	ACT	GTC	CCT	GGG	AGC
1460														4369	
K	S	T	A	T	I	S	G	L	K	P	G	V	D	S	
AAG	TCT	ACA	GCT	ACC	ATC	AGC	GGC	CTT	AAA	CCT	GGA	GTT	GAT	TAT	ACC
1475														4417	
I	T	V	Y	A	V	T	G	R	D	S	P	A	S	S	
ATC	ACT	GTG	TAT	GCT	GTC	ACT	GGC	CGT	GGA	GAC	AGC	CCC	GCA	AGC	AGC
1490														4513	
														1500	

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FIGURE 1-18

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K	P	I	S	I	N	Y	R	T	E	I	D	K	P	S	Q
AAG	CCA	ATT	TCC	ATT	AAT	TAC	CGA	ACA	GAA	ATT	GAC	AAA	CCA	TCC	CAG
1505															4561
M	Q	V	T	D	V	Q	D	N	S	I	S	V	K	W	L
ATG	CAA	GTG	ACC	GAT	GTG	CAG	GAC	AAC	AGC	ATT	AGT	GTC	AAG	TGG	CTG
1520															4609
P	S	S	P	V	T	G	Y	R	V	T	T	T	P	K	
CCT	TCA	AGT	TCC	CCT	GTG	ACT	GGT	TAC	AGA	GTA	ACC	ACC	ACT	CCC	AAA
1540															4657
N	G	P	G	P	T	K	T	K	T	A	G	P	D	Q	T
AAT	GGA	CCA	GGA	CCA	ACA	AAA	ACT	AAA	ACT	GCA	GGT	CCA	GAT	CAA	ACA
1555															4705
E	M	T	I	E	G	L	Q	P	T	V	E	Y	V	V	S
GAA	ATG	ACT	ATT	GAA	GGC	TTG	CAG	CCC	ACA	GAG	TAT	GTG	GAG	TGT	AGT
1570															4753

FIGURE 1-19

V Y A Q N P S G E S Q P L V Q T
 GTC TAT GCT CAG AAT CCA AGC CGA GAG AGT CAG CCTT CTC GCT CAG ACT
 1585 1590 1595 1600

A V T N I D R P K G L A F T D V
 GCA GTA ACC AAC ATT GAT CGC CCT AAA CGA CTG GCA TTC ACT GAT GTC
 1605 1610 1615

D V D S I K I A W E S P Q G Q V
 GAT GTC GAT TCC ATC AAA ATT GCT TCG GAA AGC CCA CAG GGG CAA GTT
 1620 1625 1630

S R Y R V T Y S P E D G I H E
 TCC AGG TAC AGG GTG ACC TAC TCG AGC CCT GAG GAT GGA ATC CAT GAG
 1635 1640 1645

L F P A P D G E E D T A E L Q G
 CTA TTC CCT GCA CCT GAT GGT GAA GAC ACT GCA GAG CTG CAA GGC
 1650 1655 1660

L R P G S E Y T V S V V A L H D
 CTC AGA CCG CGT TCT GAG TAC ACA GTC AGT GTC GTT GCC TTG CAC GAT
 1665 1670 1675

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FIGURE 1-20

D M E S Q P L I G T Q S T A I P
 GAT ATG GAG CAG CCC CTG ATT GGA ACC CAG TCC ACA GCT ATT CCT
 1680 1690 1695 5089

A P T D L K F T Q V T P T S L S
 GCA CCA ACT GAC CTG AAG TTC ACT CAG GTC ACA CCC ACA AGC CTG AGC
 1700 1705 1710 5137

A Q W T P P N V Q L T G Y R V R
 GCC CAG TGG ACA CCA CCC AAT GTT CAG CTC ACT GGA TAT CGA GTG CGG
 1715 1720 1725 5185

V T P K E K T G P M K E I N L A
 GTG ACC CCC AAG GAG AAG ACC GGA CCA ATG AAA GAA ATC AAC CTT CCT
 1730 1735 1740 1745 5233

P D S S V V S G L M V A T K
 CCT GAC AGC TCA TCC GTG GTT GTA TCA CGA CTT ATG GTC GCC ACC AAA
 1745 1750 1755 5281

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FIGURE 1-21

Y E S V Y A L K D T L T S R P
 TAT GAA GTC AGT GTC TAT GCT CTT AAG GAC ACT TTG ACA AGC AGA CCA
 1760 1765 1770 1775 5329

A Q G V V T T L E N V S P P R R
 GCT CAG CGT GTT GTC ACC ACT CTG GAG AAT GTC AGC CCA CCA AGA AGG
 1780 1785 1790 1795 5377

A R V T D A T E T T I T I S W R
 GCT CGT GTG ACA GAT GCT ACT GAG ACC ACC ATT ACC ATT AGC TGG AGA
 1795 1800 1805 1810 5425

T K T E T I T G F Q V D A V P A
 ACC AAG ACT GAG ACG ATC ACT GGC TTC CAA GTT GAT GCC GTT CCA GCC
 1810 1815 1820 1825 5473

N G Q T P I Q R T I K P D V R S
 AAT GGC CAG ACT CCA ATC CAG AGA ACC ATC AAG CCA GAT GTC AGA AGC
 1825 1830 1835 1840 5521

Y T I T G L Q P G T D Y K I Y L
 TAC ACC ATC ACA GGT TTA CAA CCA GGC ACT GAC TAC AAG ATC TAC CTG
 1840 1845 1850 1855 5569

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FIGURE 1-22

Y	T	L	N	D	N	A	R	S	S	P	V	V	I	D	A	
TAC	ACC	TTC	AAT	GAC	AAT	GCT	CGG	ACC	TCC	CCT	GTC	GTC	ATC	GAC	GGC	5617
1860	1865	1870	1875	1880	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935	
P	N	S	L	L	V	S	W	Q	P	P	R	A	R	I	T	22/86
CCC	AAT	TCC	TTC	CTG	GTA	TCA	TGG	CAG	CCC	CCA	CGT	CCC	AGG	ATT	ACC	5665
1890	1895	1900	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965	
G	C	Y	I	I	K	Y	E	K	P	G	S	P	R	E	V	
GTC	TAC	ATC	AAG	TAT	GAG	AAG	CCT	GGG	TCT	CGT	CCC	AGA	GAA	GTC	5761	
1920	1925	1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	
V	P	R	P	R	P	G	V	T	E	A	T	I	T	G	L	
GTC	CCT	CGG	CCC	CGC	CCT	GCT	GTC	ACA	GAG	GCT	ACT	ATT	ACT	GGC	CTG	5809
1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	
G	C	T	A	T	G	C	T	A	T	G	C	T	G	C	T	
1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050	

FIGURE 1-23

E	P	G	T	E	Y	T	I	Y	V	I	A	L	K	N	N
GAA	CCG	GGA	ACC	GAA	TAT	ACA	ATT	TAT	GTC	ATT	GCC	CTG	AAG	AAT	AAT
1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
Q	K	S	E	P	L	I	G	R	K	K	T	D	E	L	P
CAG	AAG	AGC	GAG	CCC	CTG	ATT	GGA	AGG	AAA	AAG	ACA	GAC	GAG	CTT	CCC
1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
Q	L	V	T	L	P	H	P	N	L	H	G	P	E	I	L
CAA	CTG	GTA	ACC	CTT	CCA	CAC	CCC	AAT	CTT	CAT	GGG	CCA	GAC	ATC	TTC
1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
D	V	P	S	T	V	Q	K	T	P	F	V	T	H	P	G
GAT	GTT	CCT	TCC	ACA	GTT	CAA	AAG	ACC	CCT	TTC	GTC	ACC	CAC	CCT	GGG
1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
Y	D	T	G	N	G	I	Q	L	P	G	T	S	G	Q	Q
TAT	GAC	ACT	GGA	AAT	GGT	ATT	CAG	CTT	CCT	GGC	ACT	TCT	GGT	CAG	CAA
2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075
P	S	V	G	Q	Q	M	I	F	E	E	H	G	F	R	R
CCC	AGT	GTT	GGG	CAA	CAA	ATG	ATC	TTT	GAG	GAA	CAT	GCT	TTT	AGG	CGG
2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075

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FIGURE 1-24

T T P P T T A T P I R H R P R P
 ACC ACA CCG CCC ACA ACG GCC ACC CCC ATA AGG CAT AGG CCA AGA CCA 6145
 2035 2040 2045

Y P P N V G Q E A L S Q T T I S
 TAC CCG CCG AAT GTA GGA CAA GAA GCT CTC TCT CAG ACA ACC ATC TCA 6193
 2050 2055 2060

W A P F Q D T S E Y I I S C H P
 TGG GCC CCA TTC CAG GAC ACT TCT GAG TAC ATC ATT TCA TGT CAT CCT 6241
 2065 2070 2075

V G T D E E P L Q F R V P G T S
 GTT GCC ACT GAT GAA GAA CCC TTA CAG TTC AGG GTT CCT GGA ACT TCT 6289
 2080 2085 2090 2095

T S A T L T G L T R G A T Y N I
 ACC AGT GCC ACT CTG ACA GGC CTC ACC AGA GGT GCC ACC TAC AAC ATC 6337
 2100 2105 2110

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FIGURE 1-25

I V E A L K D Q Q R H K V R E E
 ATA GTG GAG GCA CTG AAA GAC CAG CAG AGG CAT AAG GTT CGG GAA GAG
 2115 6385

V V T V G N S V N E G L N Q P T
 GTT GTR ACC GTG GGC AAC TCT GTC AAC GAA GCC TTG AAC CAA CCT ACG
 2120 2125 6433

D D S C F D P Y T V S H Y A V G
 GAT GAC TCG TGC TTT GAC CCC TAC ACA GTC TCC CAT TAT GCC GTT GGA
 2130 2135 2140 2145 2155 25/86 6481

D E W E R M S E S G F K L L C Q
 GAT GAG TGG GAA CGA ATG TCT GAA TCA GCC TTT AAA CTG TGC TGC CAG
 2150 2155 2160 2165 2170 2175 6529

C L G F G S G H F R C D S S R W
 TGC TTA GGC TTT GGA AGT GGT CAT TTC AGA TGT GAT TCA TCT AGA TGG
 2170 2185 2190 2195 2200 6577

C H D N G V N Y K I G E K W D R
 TGC CAT GAC AAT GGT GTG AAC TAC AAG ATT GGA GAG AAG TGG GAC CGT
 2205 6625

FIGURE 1-26

Q	G	E	N	G	Q	M	S	C	T	C	L	G	N	G	
CAG	GGA	GAA	AAT	GGC	CAG	ATG	ATG	AGC	TGC	ACA	TGT	CTT	GGG	AAC	GGA
2210						2215						2220			6673

K	G	E	F	K	C	D	P	H	E	A	T	C	Y	D	D
AAA	GGA	GAA	ATC	AAG	TGT	GAC	CCT	CAT	GAG	GCA	ACG	TGT	TAC	GAT	GAT
2225						2230						2235			6721

G	K	T	Y	H	V	G	E	Q	W	Q	K	E	Y	L	G
GGG	AAG	ACA	TAC	CAC	GTAA	GGA	GAA	CAG	TGG	CAG	AAG	GAA	TAT	CTC	GGT
2240						2245						2250			6769

A	I	C	S	C	T	C	F	G	G	Q	R	G	W	R	C
CCC	ATT	TGC	TCC	TGC	ACA	TGC	TTT	GGA	GGC	CAG	CGG	GGC	TGG	CGC	TGT
2260						2265						2270			6817

D	N	C	R	R	P	G	G	E	P	S	P	E	G	T	T
GAC	AAC	TGC	CGC	AGA	CCT	GGG	GGT	GAA	CCC	AGT	CCC	GAA	GGC	ACT	ACT
2275						2280						2285			6865

FIGURE 1-27

G	Q	S	Y	N	Q	S	R	Y	H	Q	R	T	N		
GGC	CAG	TCC	TAC	AAC	CAG	TAT	TCT	CAG	AGA	TAC	CAT	CAG	AGA	ACA	AAC
2290	2295	2300	2305	2310	2315	2320	2325	2330	2335	2340	2345	2350	2355	2360	2365
27/86															
A	D	R	E	D	S	R	E	G	T	M	P	L	D	V	Q
ACT	AAT	GTT	AAT	TGC	CCA	ATT	GAG	TGC	TTC	ATG	CCT	TTA	GAT	GTA	CAG
2305	2310	2315	2320	2325	2330	2335	2340	2345	2350	2355	2360	2365	2370	2375	2380
7009															
AAC	AAG	CAT	GTC	TCT	CTG	CCA	AGA	TCC	ATC	TAA	ACT	GGA	GTG	ATG	TTA
2340	2345	2350	2355	2360	2365	2370	2375	2380	2385	2390	2395	2400	2405	2410	2415
7057															
GCA	GAC	CCA	GCT	TAG	AGT	TCT	TCT	TTC	TTT	CTT	AAG	CCC	TTT	GCT	CTG
2355	2360	2365	2370	2375	2380	2385	2390	2395	2400	2405	2410	2415	2420	2425	2430
7105															
GAG	GAA	GTT	CTC	CAG	CTT	CAG	CTC	AAC	TCA	CAG	CTT	CTC	CAA	GCA	TCA
2370	2375	2380	2385	2390	2395	2400	2405	2410	2415	2420	2425	2430	2435	2440	2445
7153															

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FIGURE 1-28

CCC TGG GAG TTT CCT GAG GGT TTT CTC ATA AAT GAG GCC TGC ACA TTG	7201		
2385	2390	2395	
CCT GTT CTG CTT CGA AGT ATT CAA TAC CGC TCA GTA TTT TAA ATG AAG	7249		
2400	2405	2410	2415
TGA TTC TAA GAT TTG GTT TGG GAT CAA TAG GAA AGC ATA TGC AGC CAA	7297		
2420	2425	2430	28/86
CCA AGA TGC AAA TGT TTT GAA ATG ATA TGA CCA AAA TTT TAA GTA GGA	7345		
2435	2440	2445	
AAG TCA CCC AAA CAC TTC TGC TTT CAC TTA ACT GTC TGG CCC GCA ATA	7393		
2450	2455	2460	
CTG TAG GAA CAA GCA TGA TCT TGT TAC TGT GAT ATT TTA AAT ATC CAC	7441		
2465	2470	2475	
AGT ACT CAC TTT TTC CAA ATG ATC CTA GTA ATT GCC TAG AAA TAT CTT	7489		
2480	2485	2490	2495

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FIGURE 1-29

TCT CTT ACC TGT TAT TTA TCA ATT TTT CCC AGT ATT TTT ATA CGG AAA 7537
2500 2505 2510
AAA TTG TAT TCA AAA CAC TTA CTA TGC ACT TGA TAA GAG GAA TTT GCT 7585
2515 2520 2525
ATA ATT ATG GTG GGT GAT TAT TTT TTA TAC TGT ATG TGC CAA AGC TTT 7633
2530 2535 2540
ACT ACT GTG GAA AGA CAA CTG TTT TAA AAG ATT TAC ATT CCA CAA 7681
2545 2550 2555
AAAAAAA AAAAAGAAA AAAA
7705

FIGURE 2A

PAIR 1

#1 5'- ATTCAATGCCAGCACAGCAAATGGTTCAAGCCCCAGTCCCCGGTGGCTGTCAAGTCAAAGCAAGCCCCGGTT -3'
#2 3'- GTATACTGGTTCGTTACCAAGTCTGGGGTCAAGGGGACCCGACAGTCAGTTCTGGGGCAACAAACATA -5'

PAIR 2

#3 5'- GTATGACAAATGGAAAAACACTATCAGATAAAATCAACAGTGGAGCGGACCTACCTAGGTAATGCTGTTG
#4 3'- CTGTTACCTTTGTGATAGCTATTAGTTGTCACCCCTGCCCTGGATGGATCCATT -5'

PAIR 3

#5 5'- GTTGTACTTGTATGGAGGAAGCCGAGGTTAACCTGGGAAAGTAAACCTGAAGCT -3'
#6 3'- ACACAAACCAATGAAACATGAAACAAATACCTCCTCGGCTCCAAAATGACGCTTCATTGGACTTCGACTTCCTCT -5'

PAIR 4

#7 5'- GAAAGAGACTTGACAAAGTACACTGGGAACACTTACCGAAGTGGGTGACACTTATGAGCGGTCTAAA -3'
#8 3'- GAAACGAAACTGTTCATGTGACCCCTTGTGAATGGCTCACCCACTGTGAATACTCGCAG .5'

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FIGURE 2B

PAIR 5

#9 5'- GACTCCATGATCTGGGACTGTACCTGCATGGGGCTGGCGAGGGAGAATAAGCTGTACC
 #10 3'- GATTTCTGAGGTACTAGACCCCTGACATGGACGTAGCCCCGCTCCCTCTTATTC -5'

PAIR 6

#11 5'- ATCGCCAACGGCTGCCATGAAGGGGTCAAGTCCTACCAAGATTGGTACACCTGGAGGAGACCACATGAGACT -3'
 #12 3'- GACATGGTAGGGTTGGCACGGTACTTCCCAGTCAGGTAGGGATGGCTAACCACTGTGGACCTCCTCTGGTACTCTGACCCCAA-5'

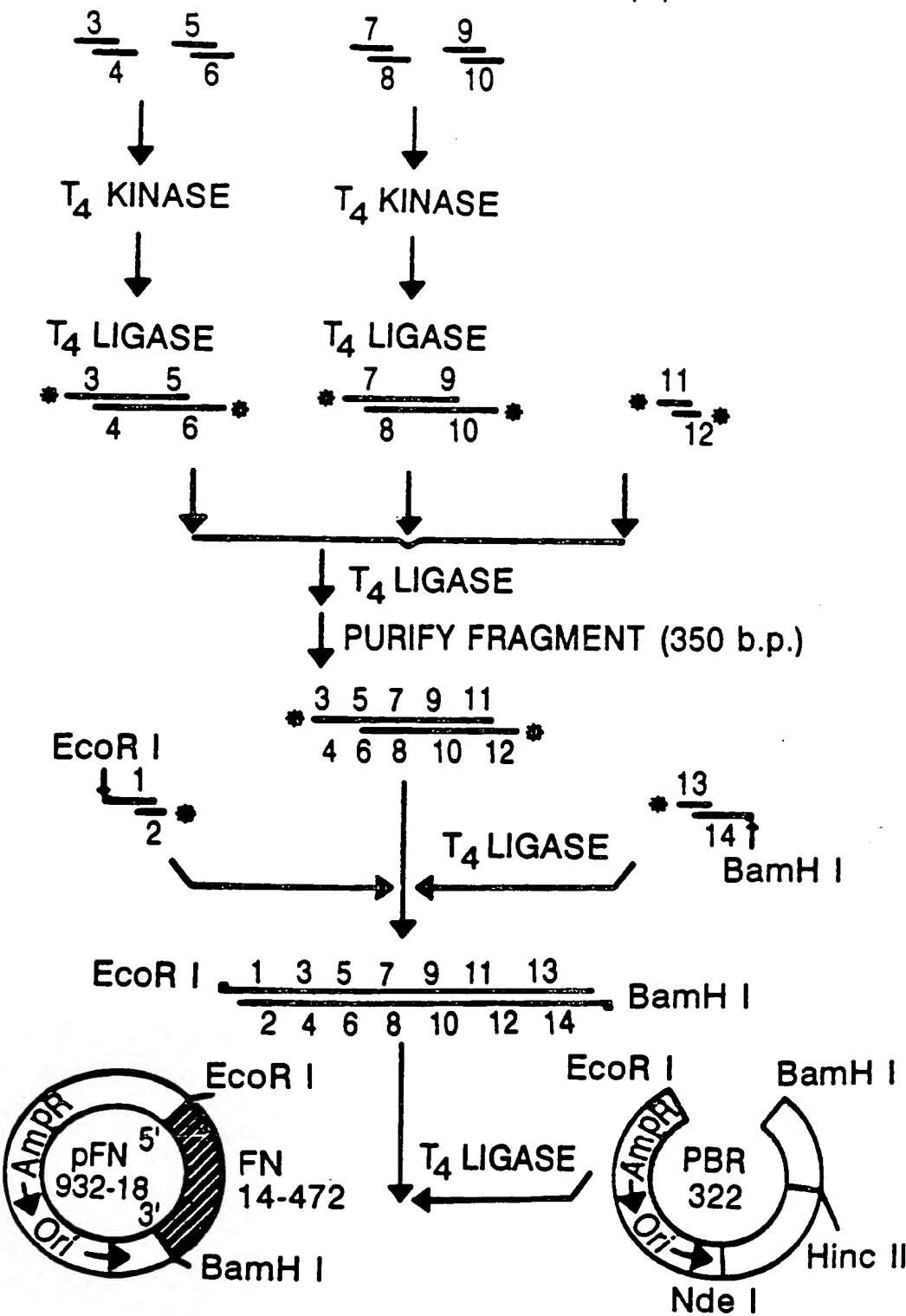
PAIR 7

#13 5'- GGTGGTTACATGTTAGAGTGTGTGTCTGGTAATGGAAAAGGAGAATGGACCTGCAAGCCCCATAGCTGAG -3'
 #14 3'- TGTACAATCTCACACACAGAACCATACCTTACCTGGACGTTGGGTATCGACTCCTAG -5'

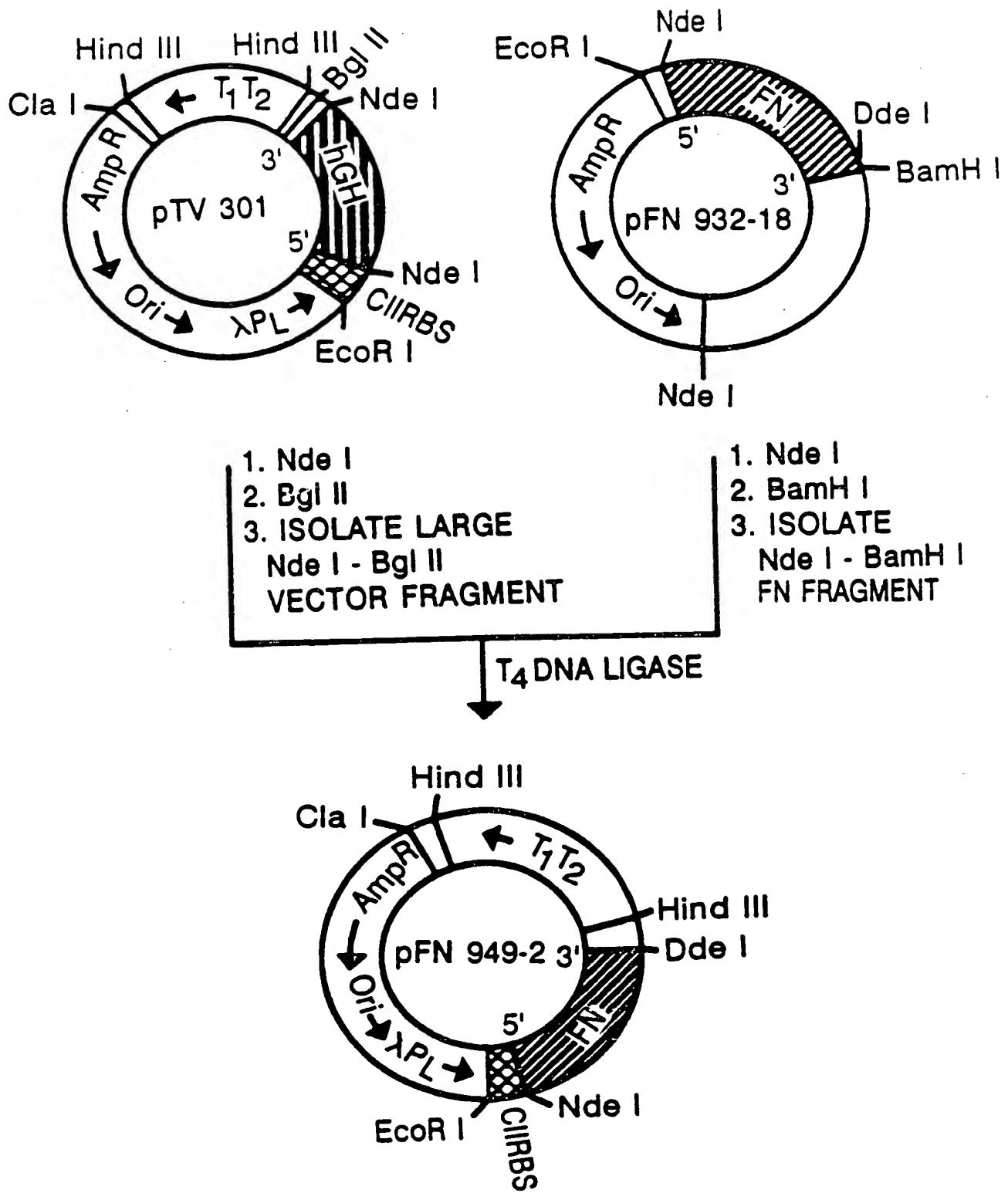
00492974 012700

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FIGURE 3

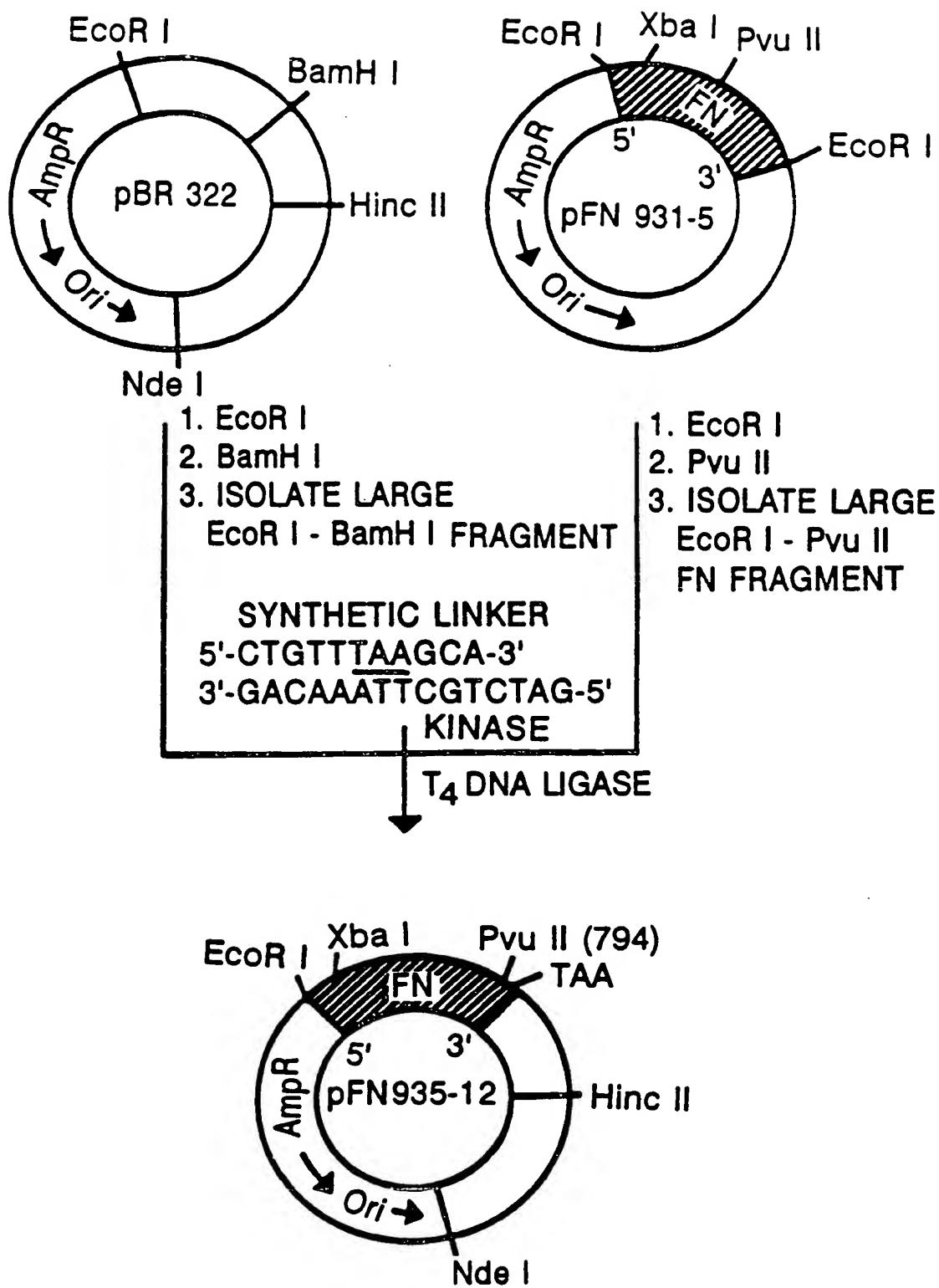
SYNTHESIS OF F.N. GENE (14-472 b.p.)



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FIGURE 4



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FIGURE 5



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FIGURE 6

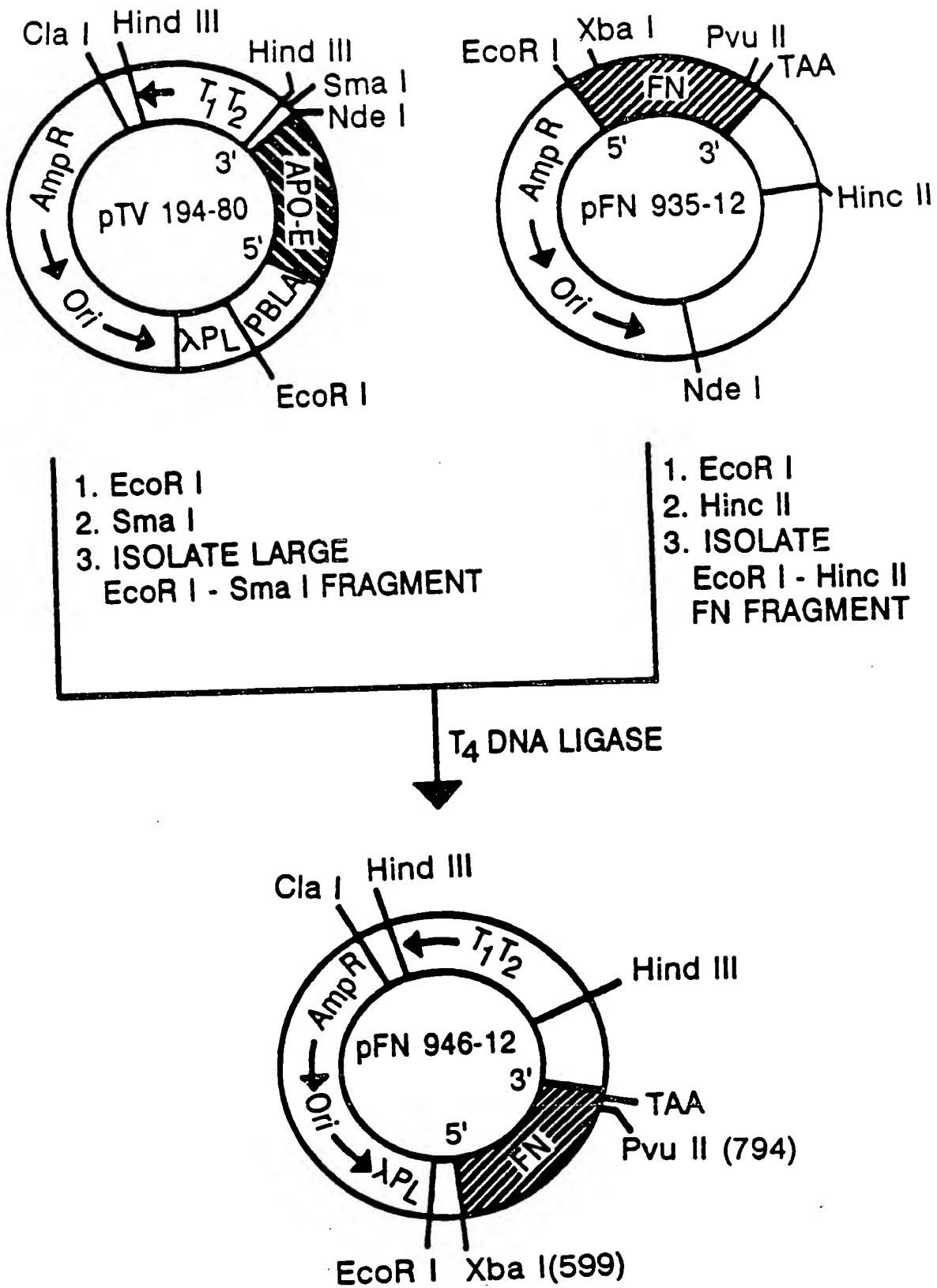
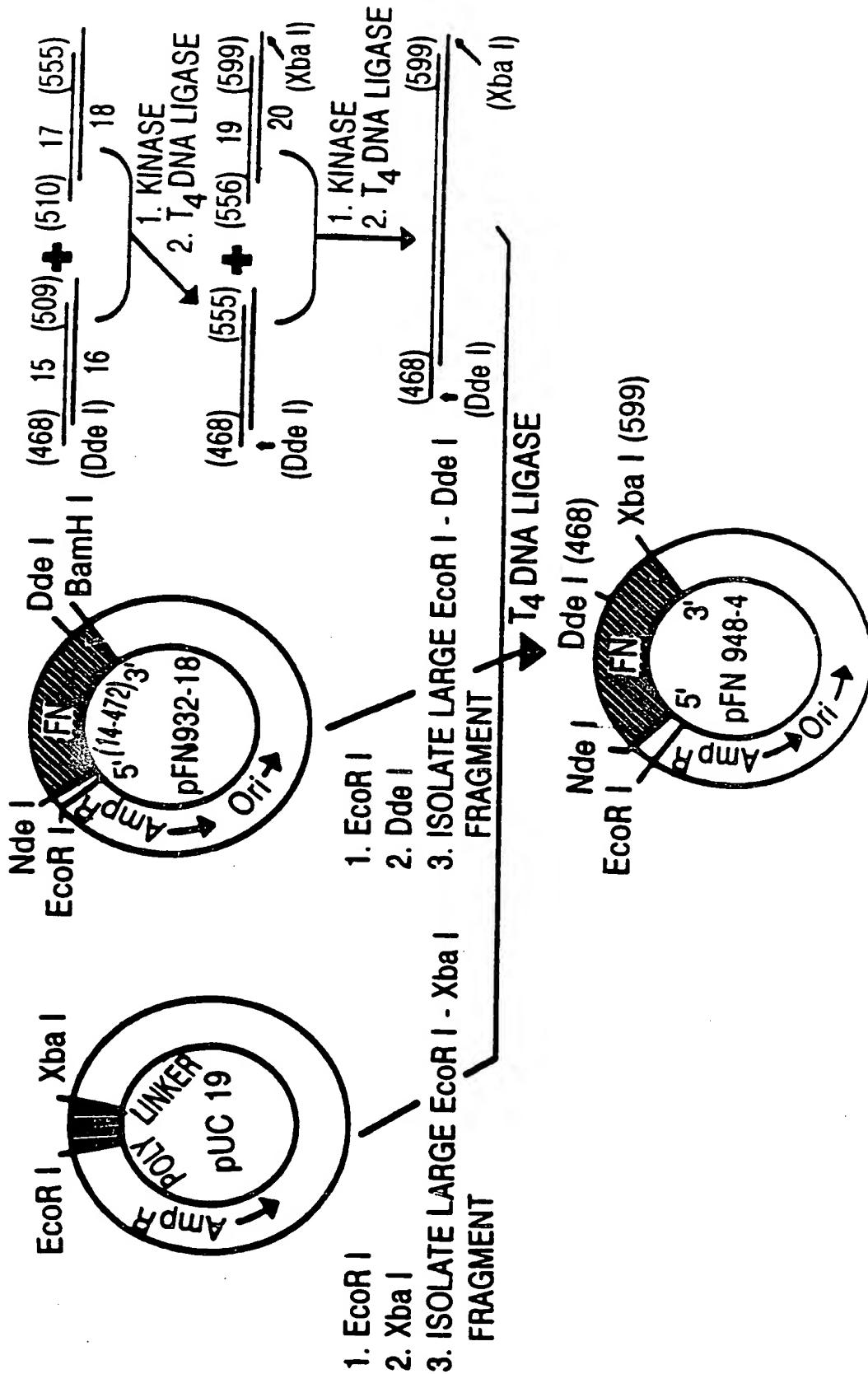
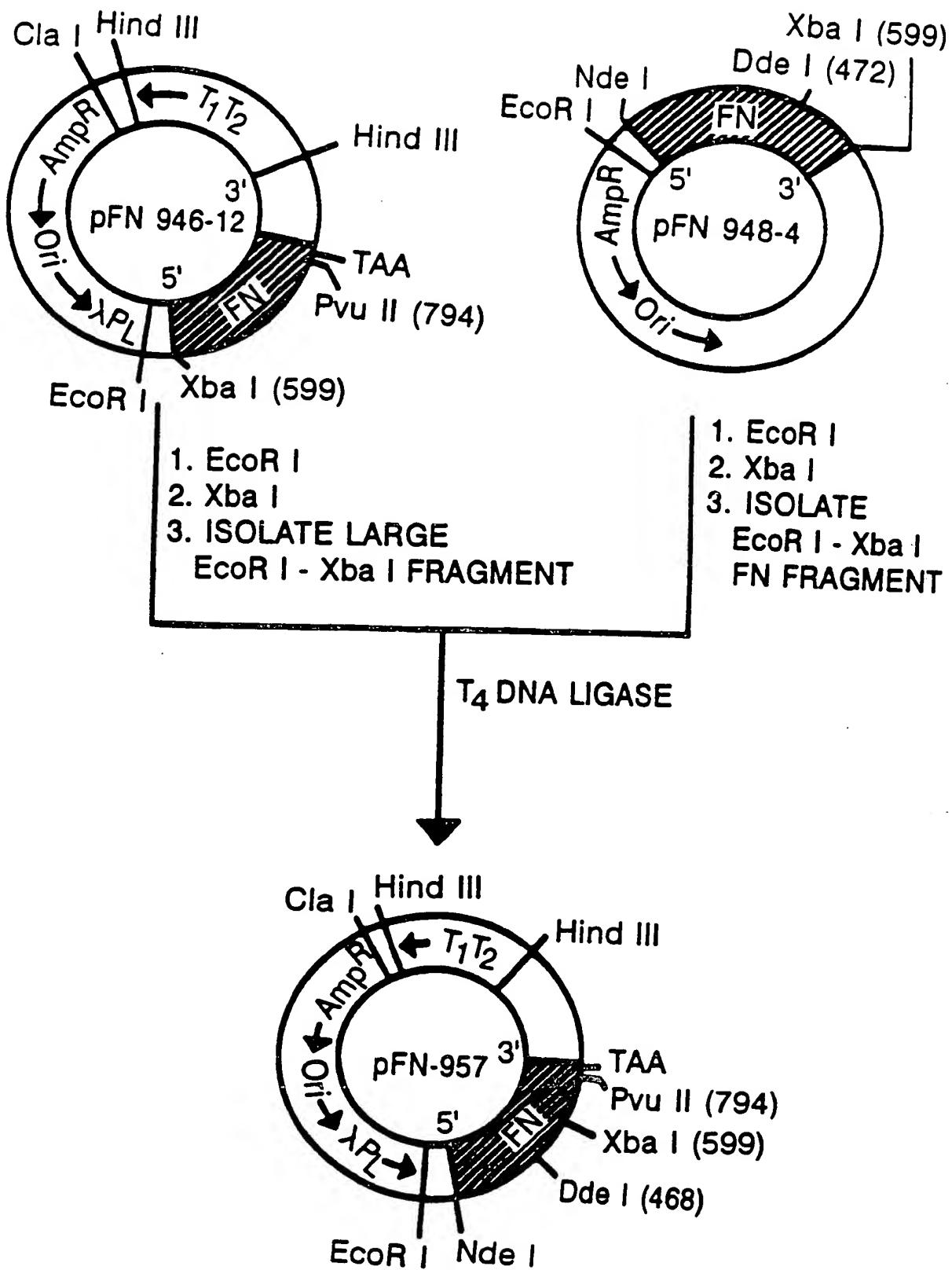


FIGURE 7

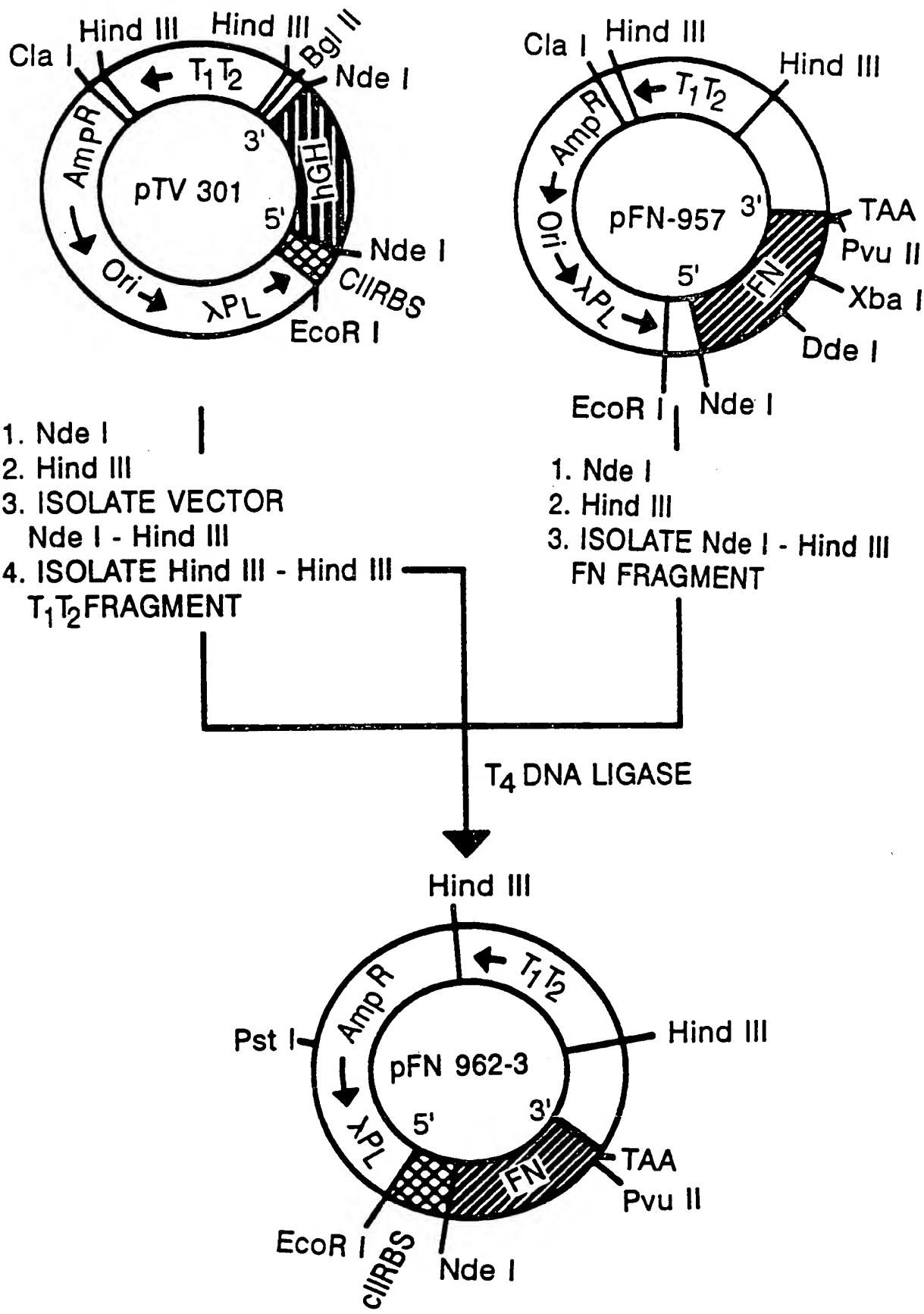
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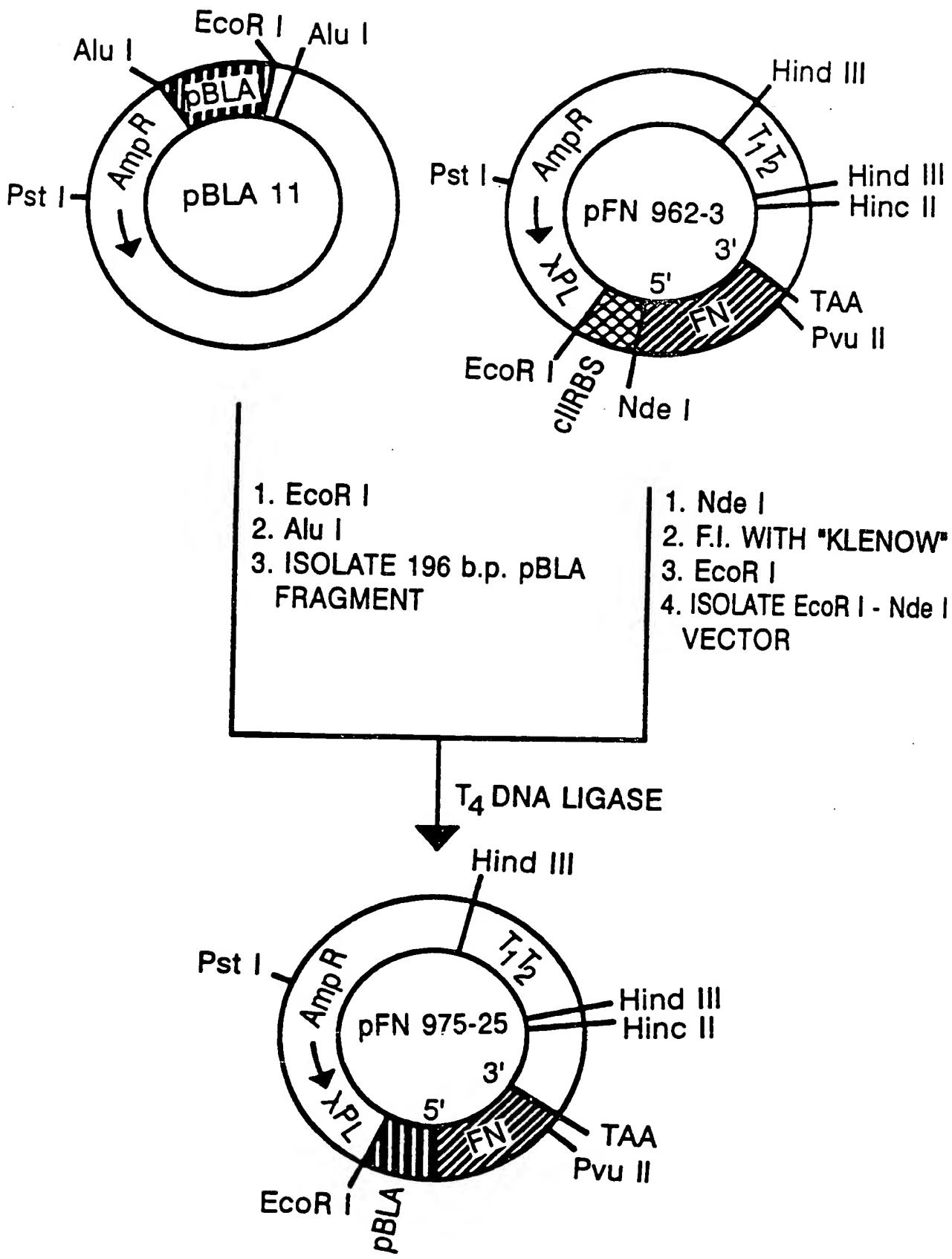
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FIGURE 8



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FIGURE 9

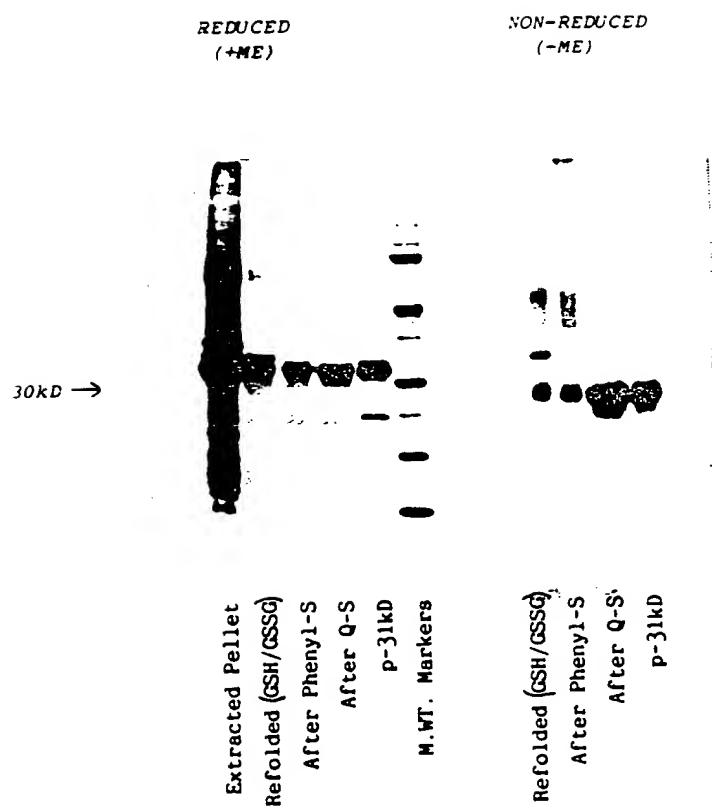


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FIGURE 10



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FIGURE 11



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FIGURE 12

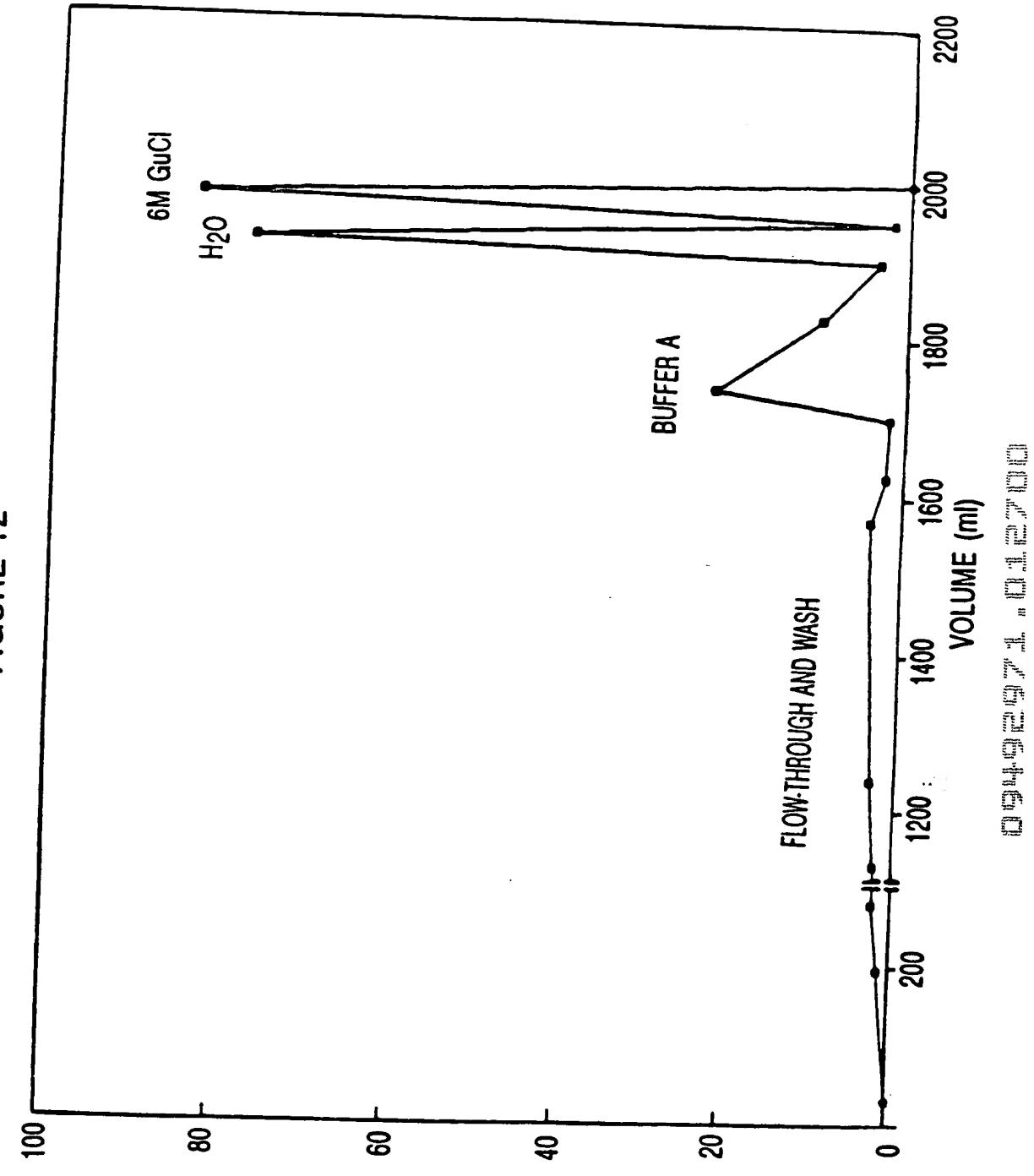
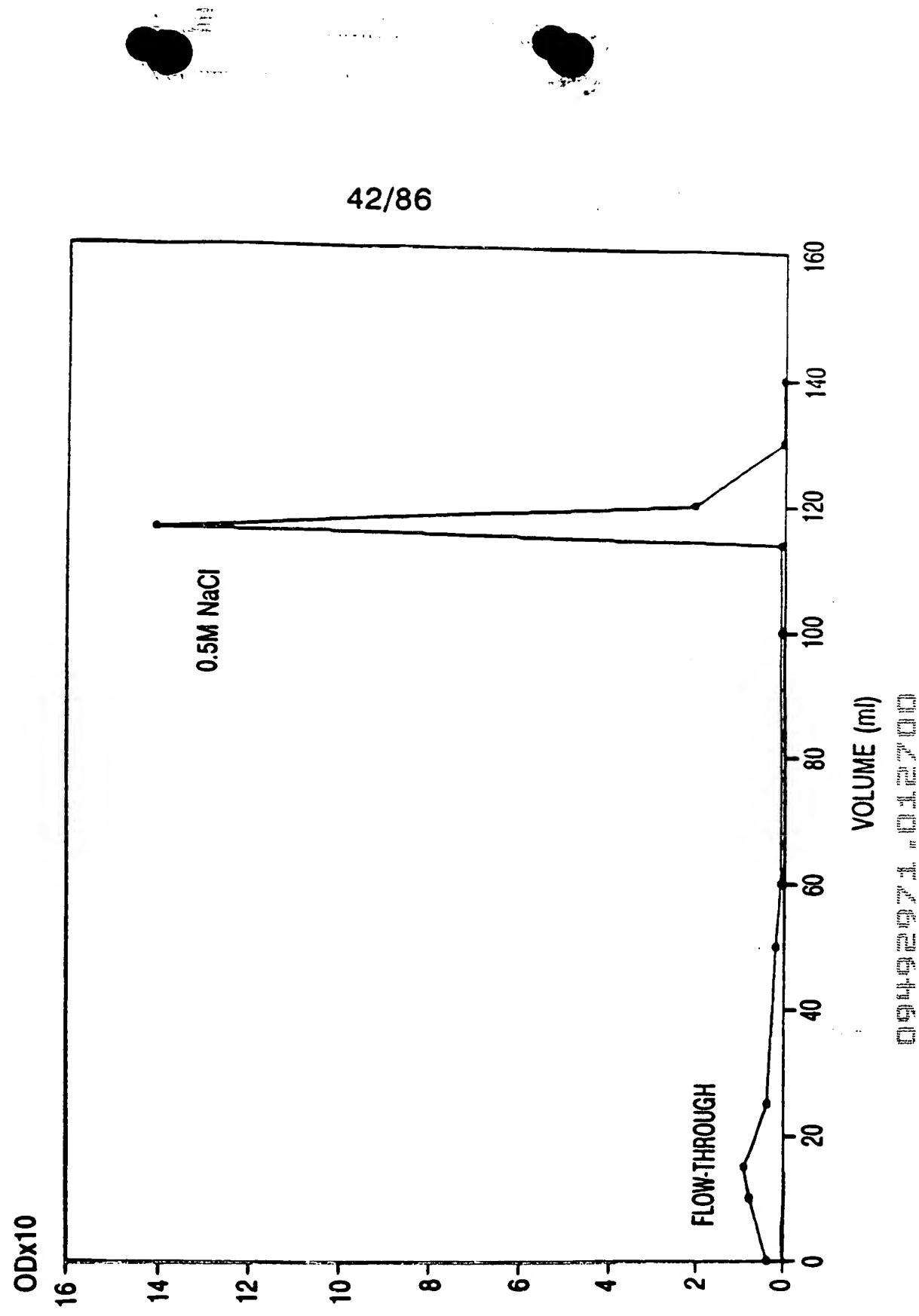
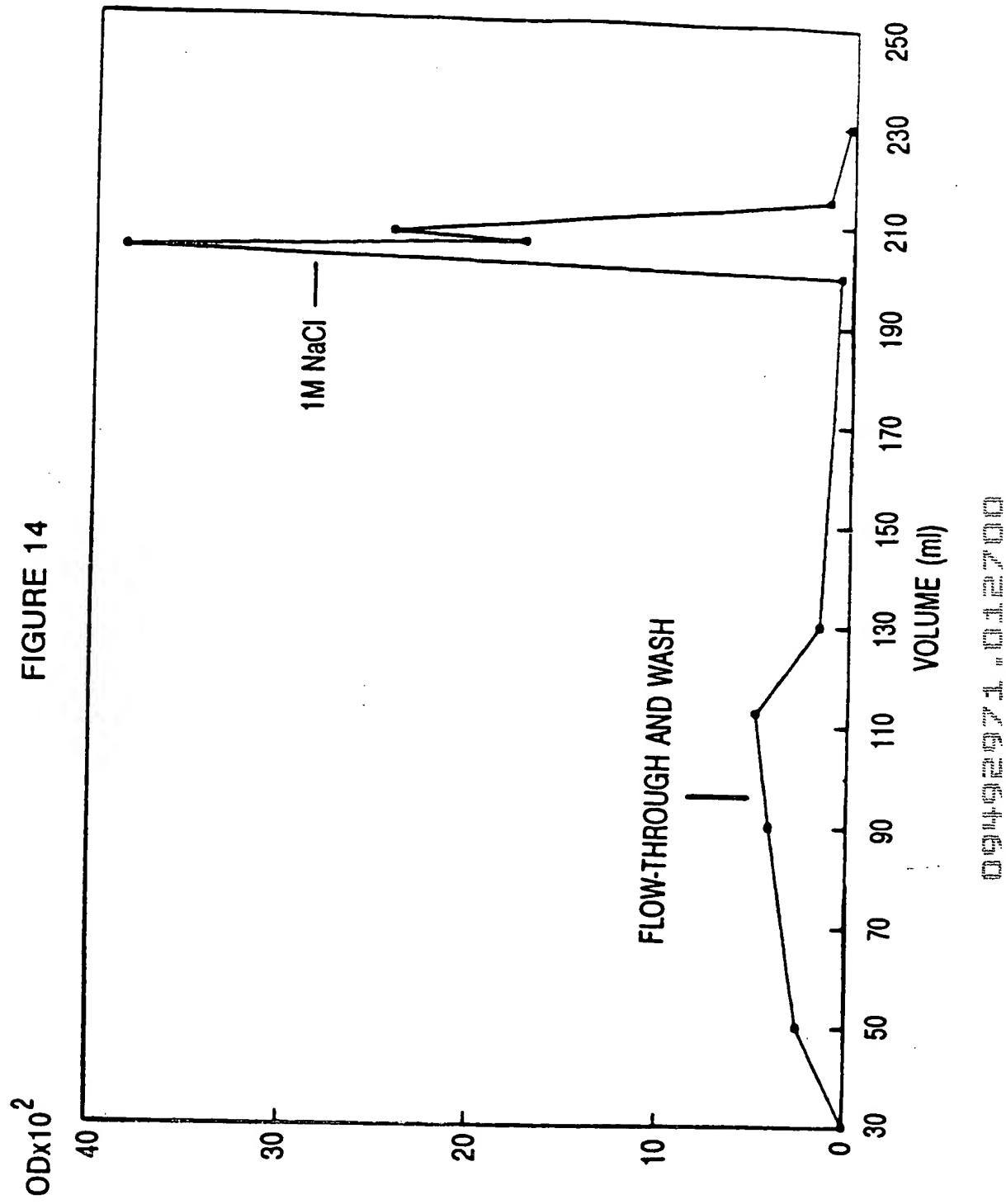


FIGURE 13



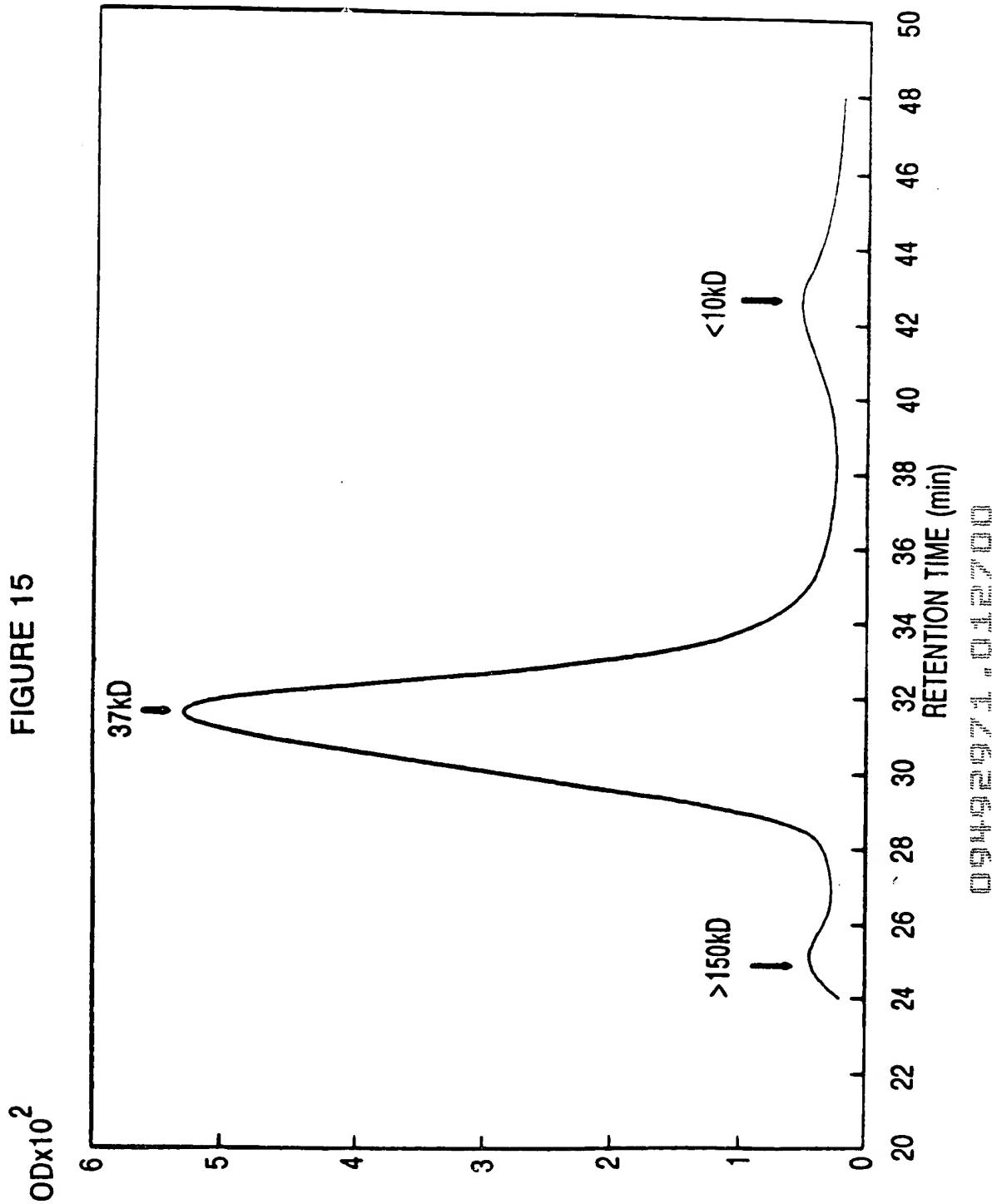
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FIGURE 14

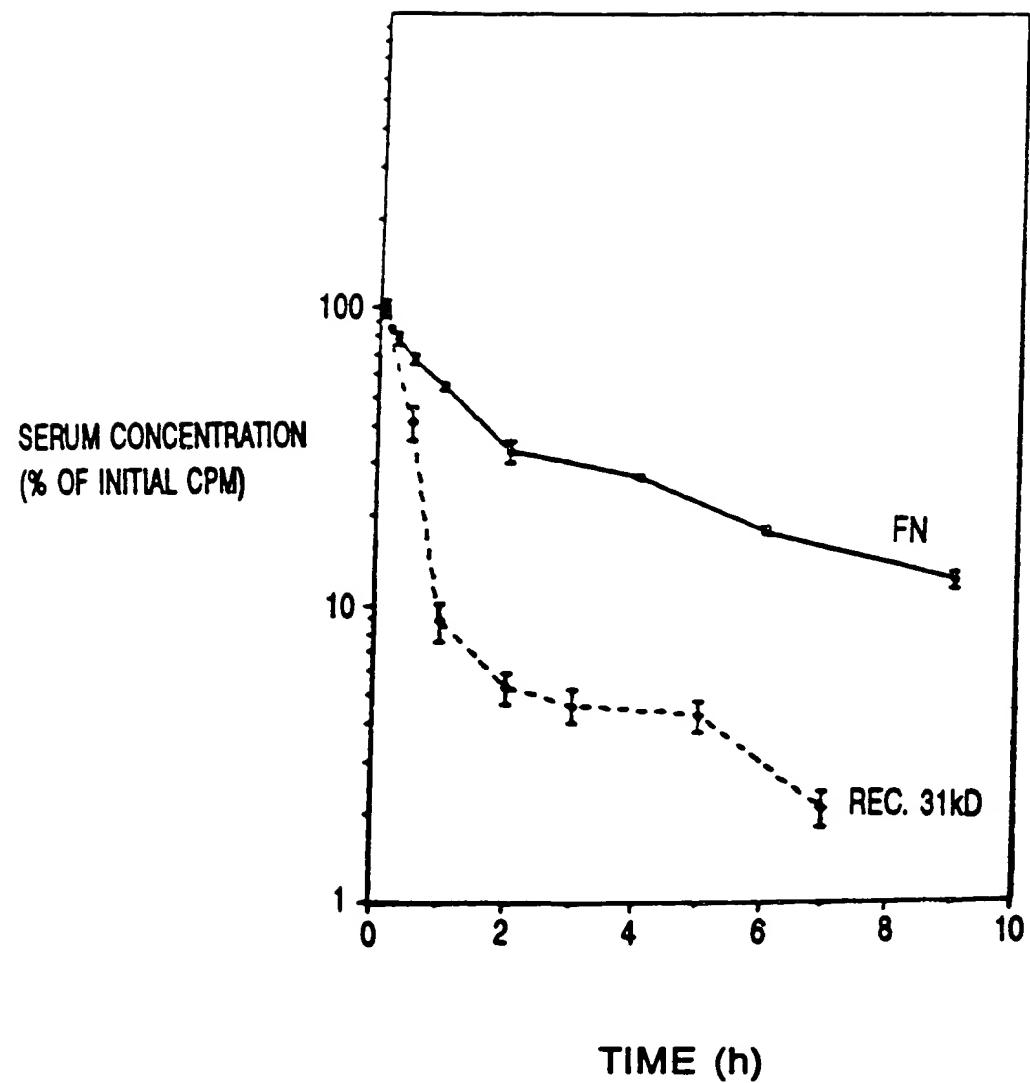


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FIGURE 15



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FIGURE 16



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FIGURE 17

I = Binding while clot formation
II = Binding to preformed Fibrin clot

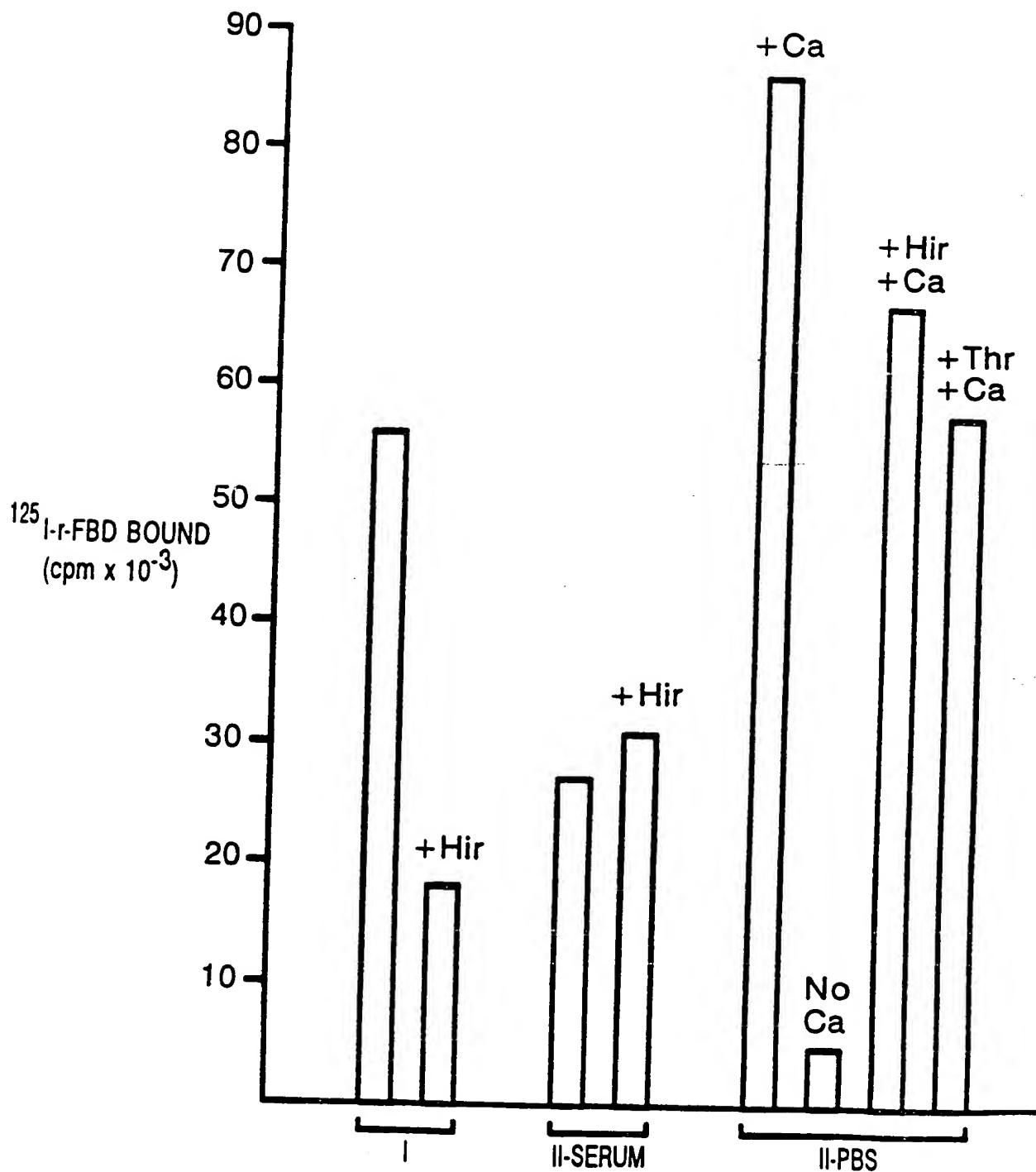
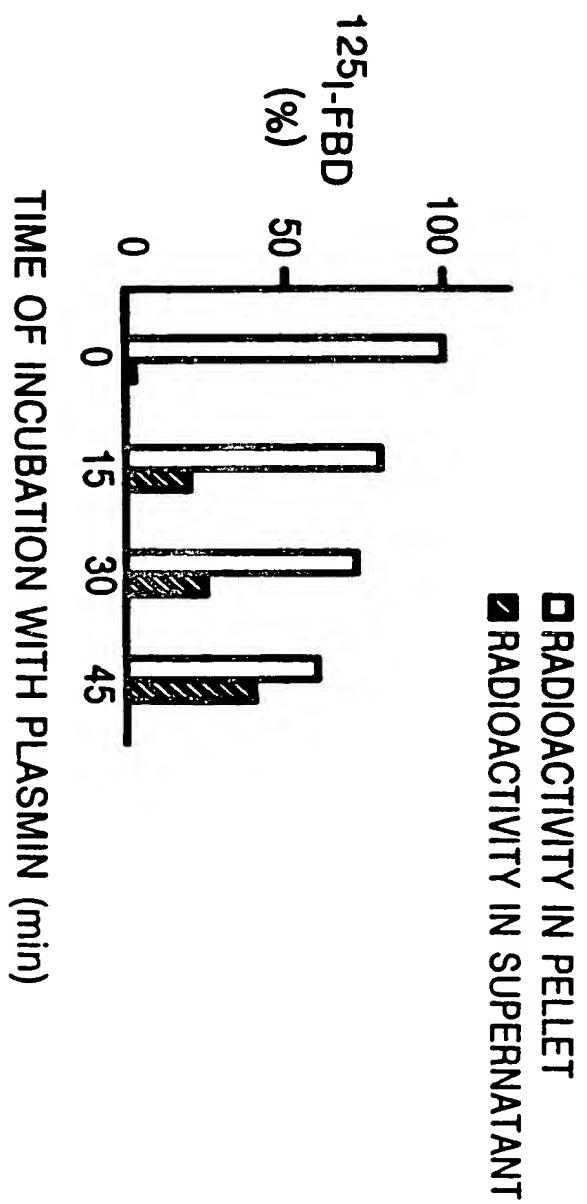


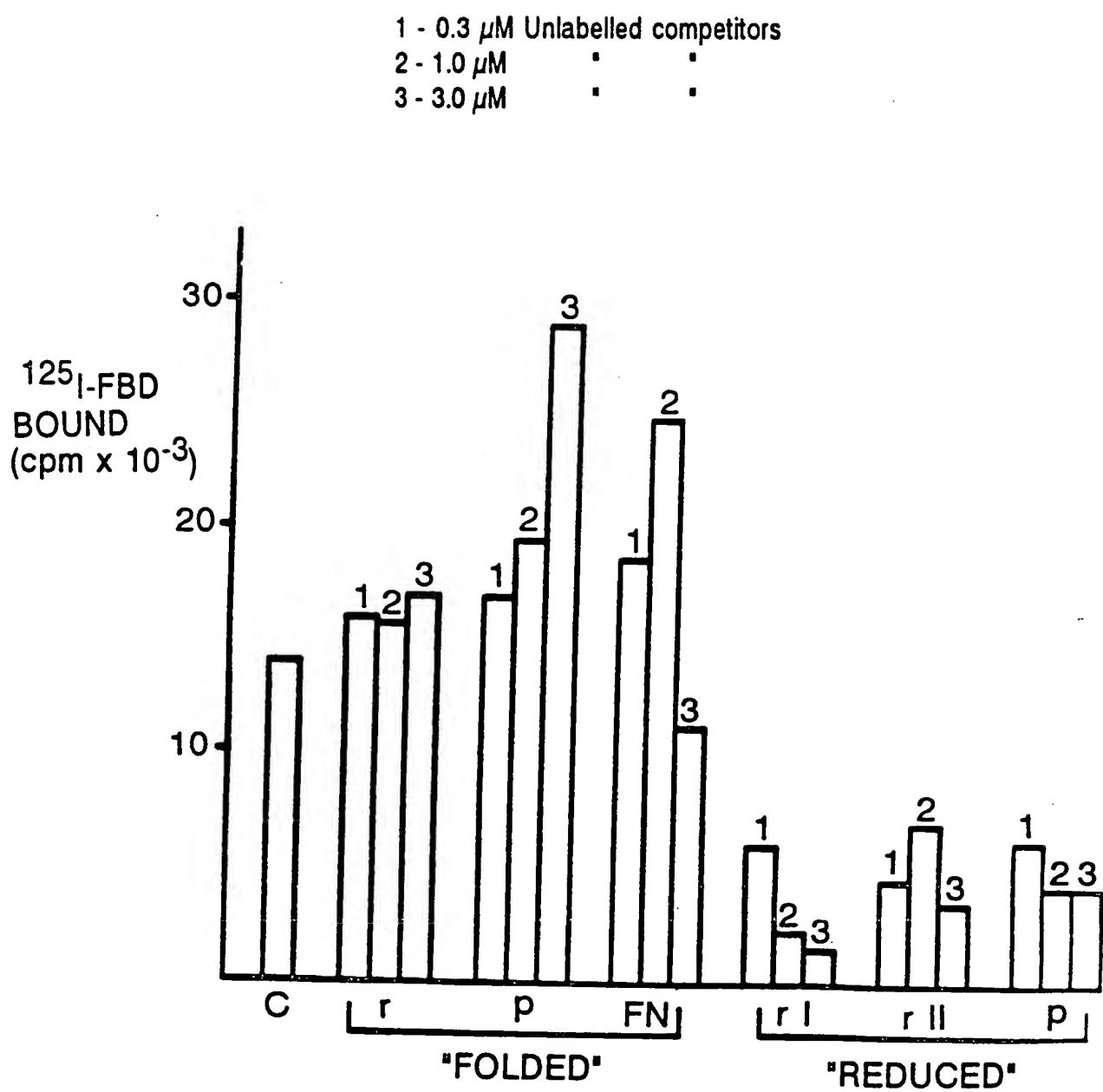
FIGURE 18



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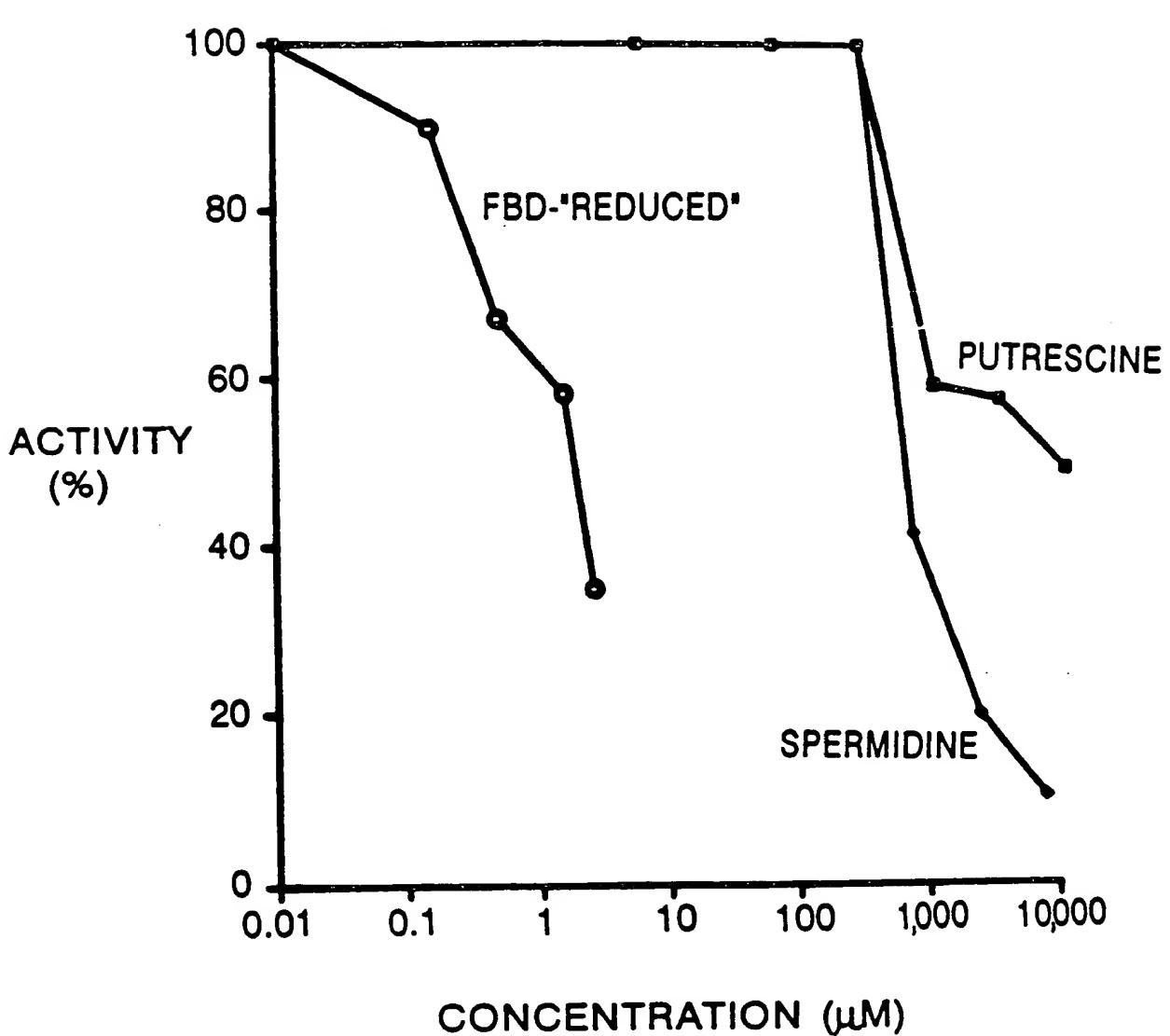
FIGURE 19

125I-FBD
BOUND
(cpm x 10⁻³)

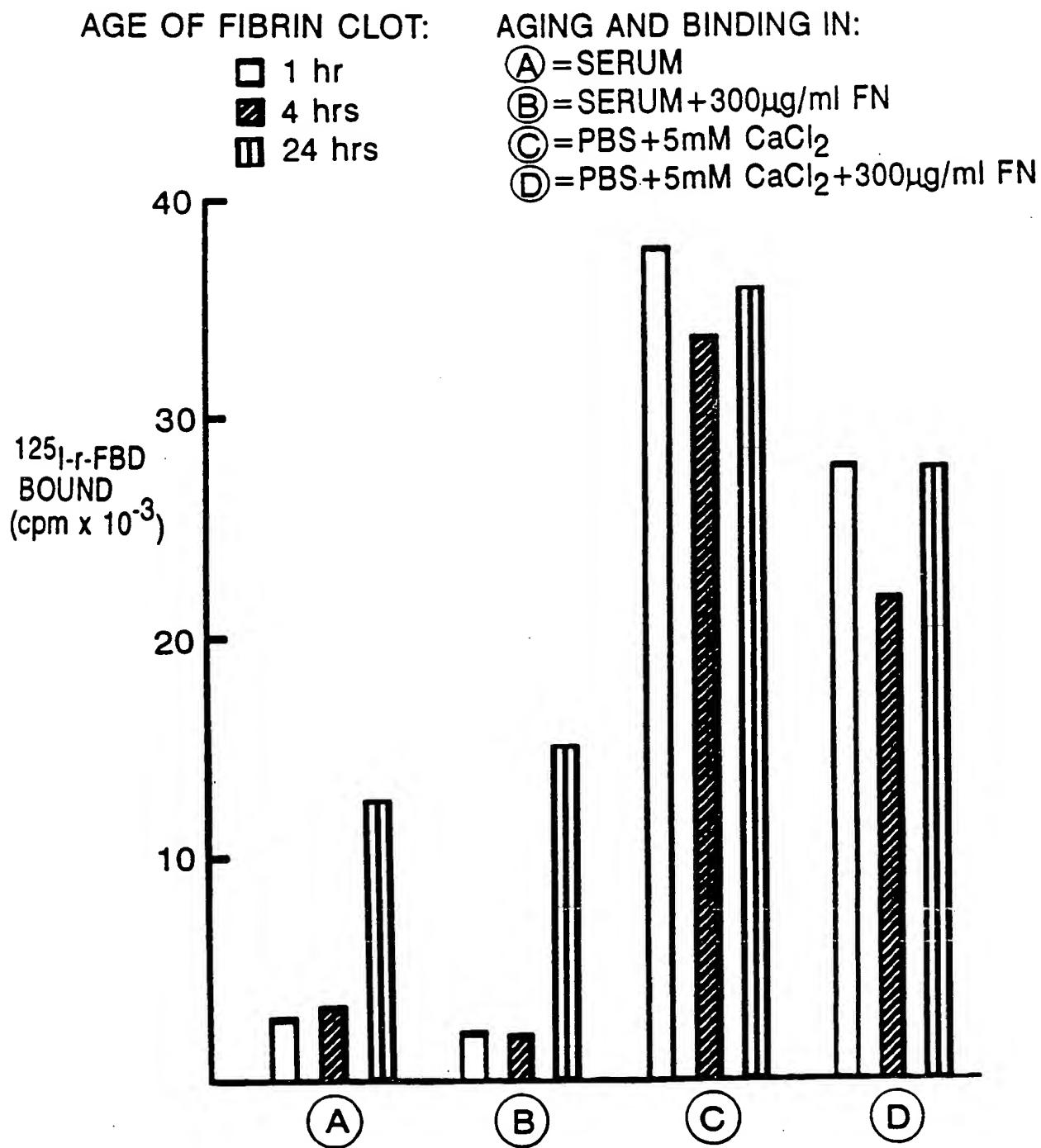


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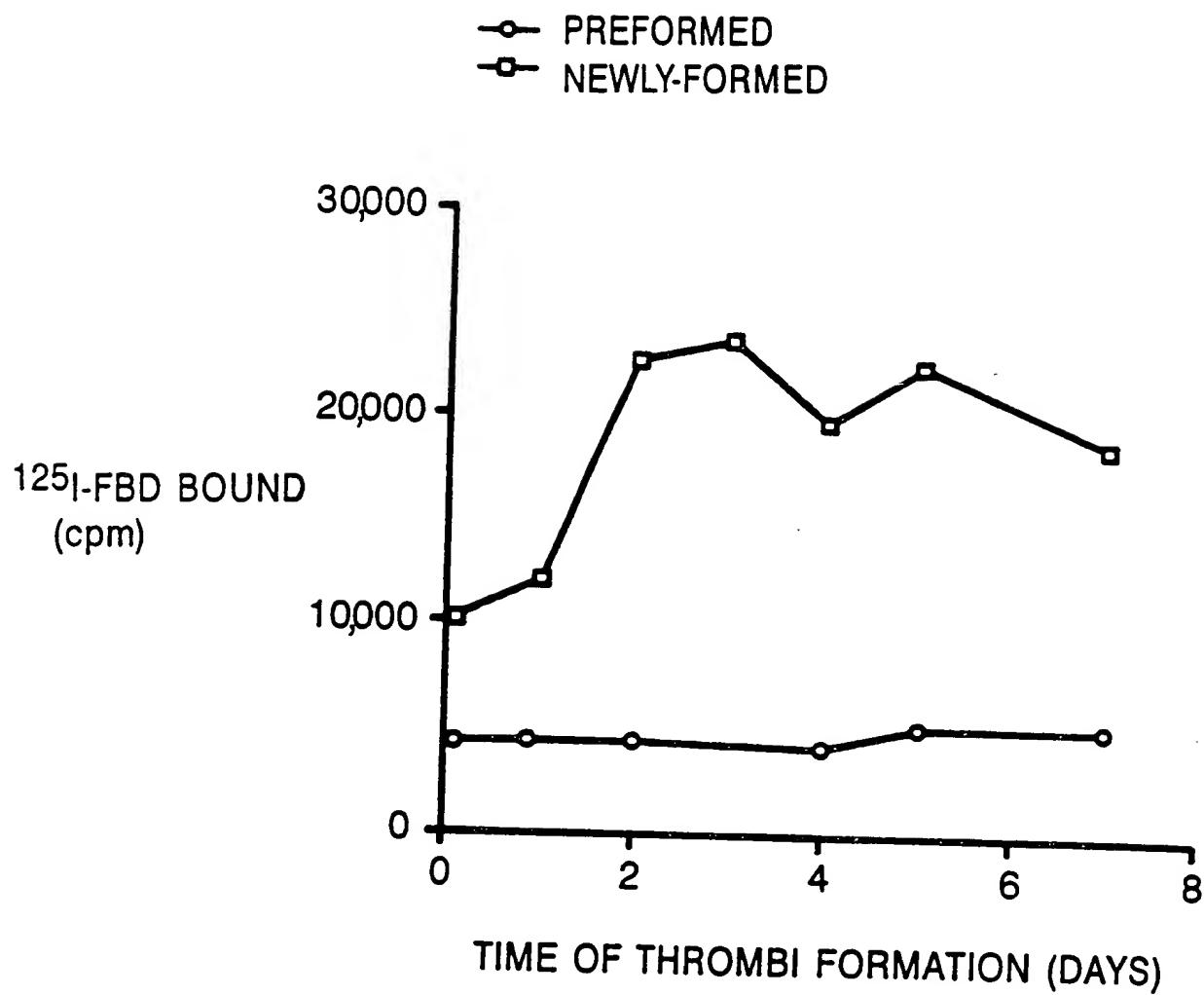
FIGURE 20



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FIGURE 21



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FIGURE 22



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FIGURE 23

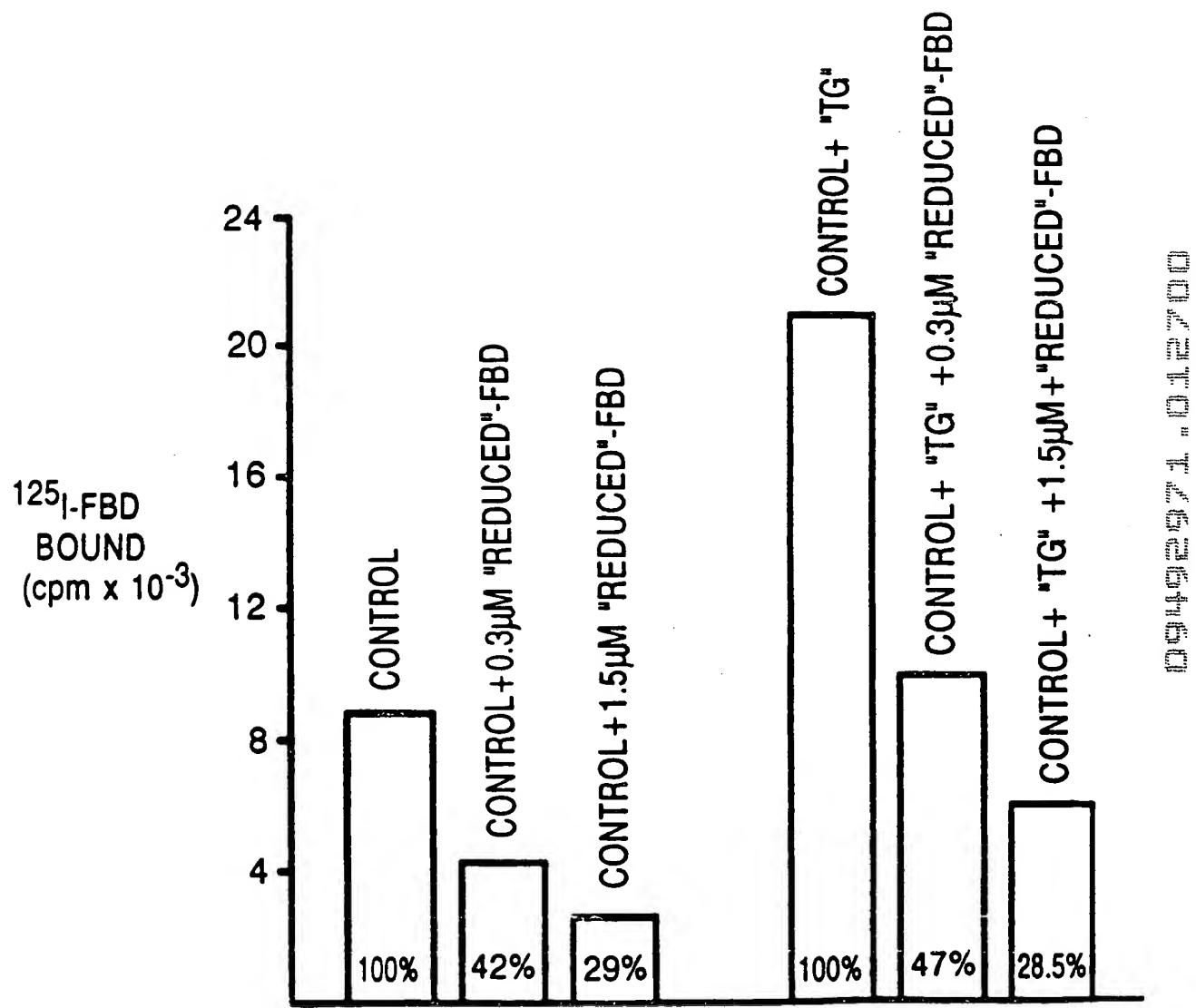
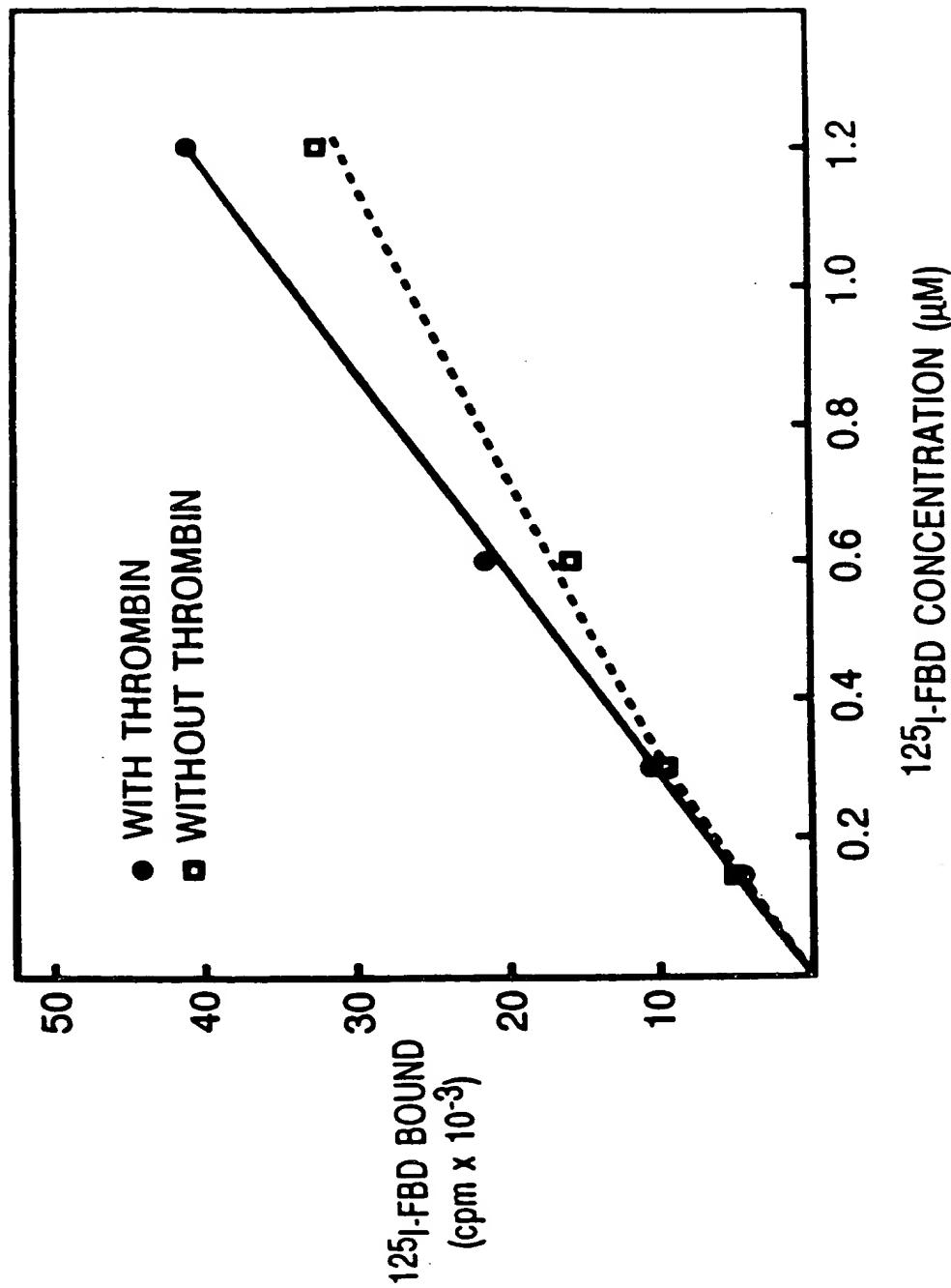
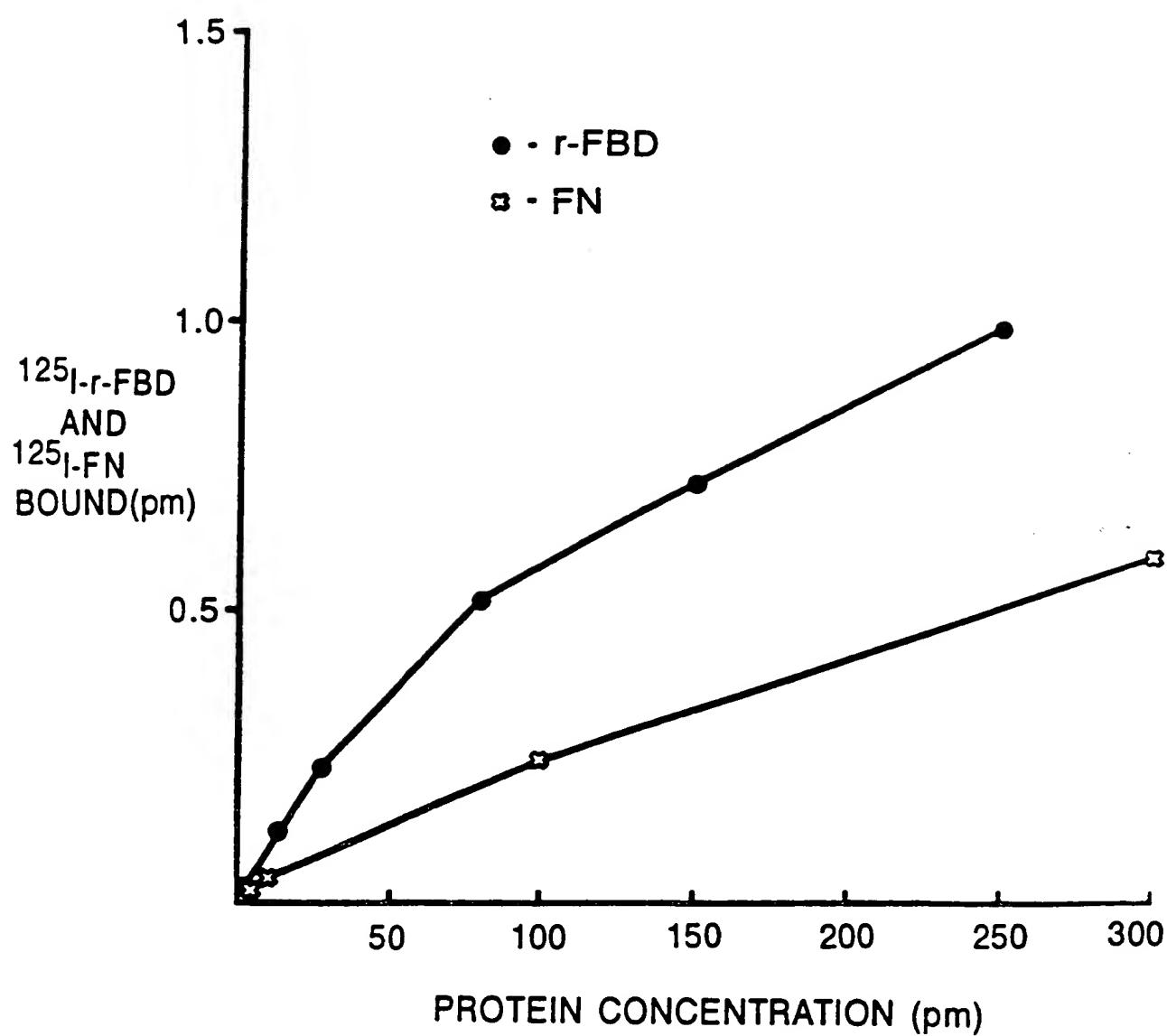


FIGURE 24

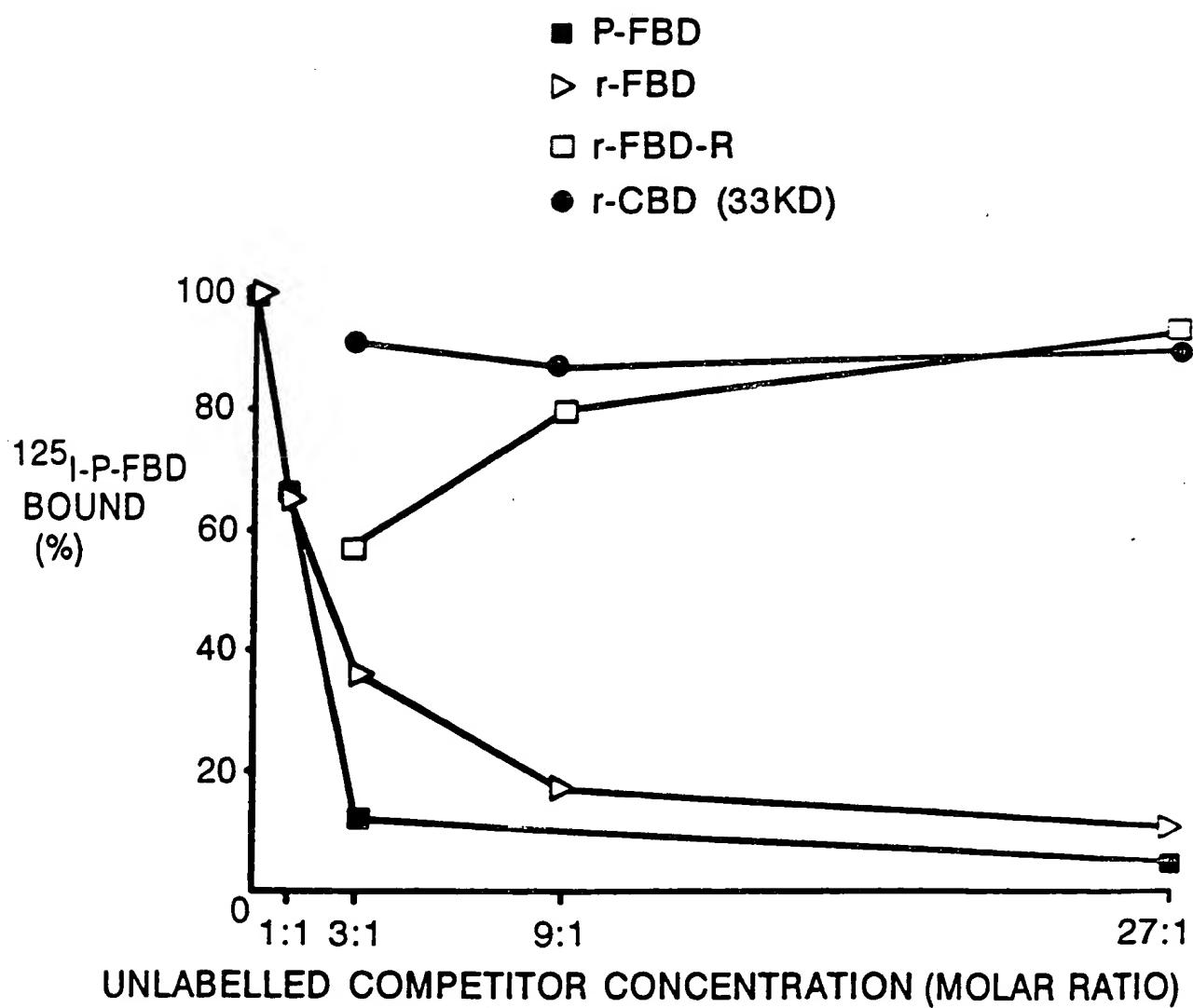


0.0 0.2 0.4 0.6 0.8 1.0 1.2

FIGURE 25

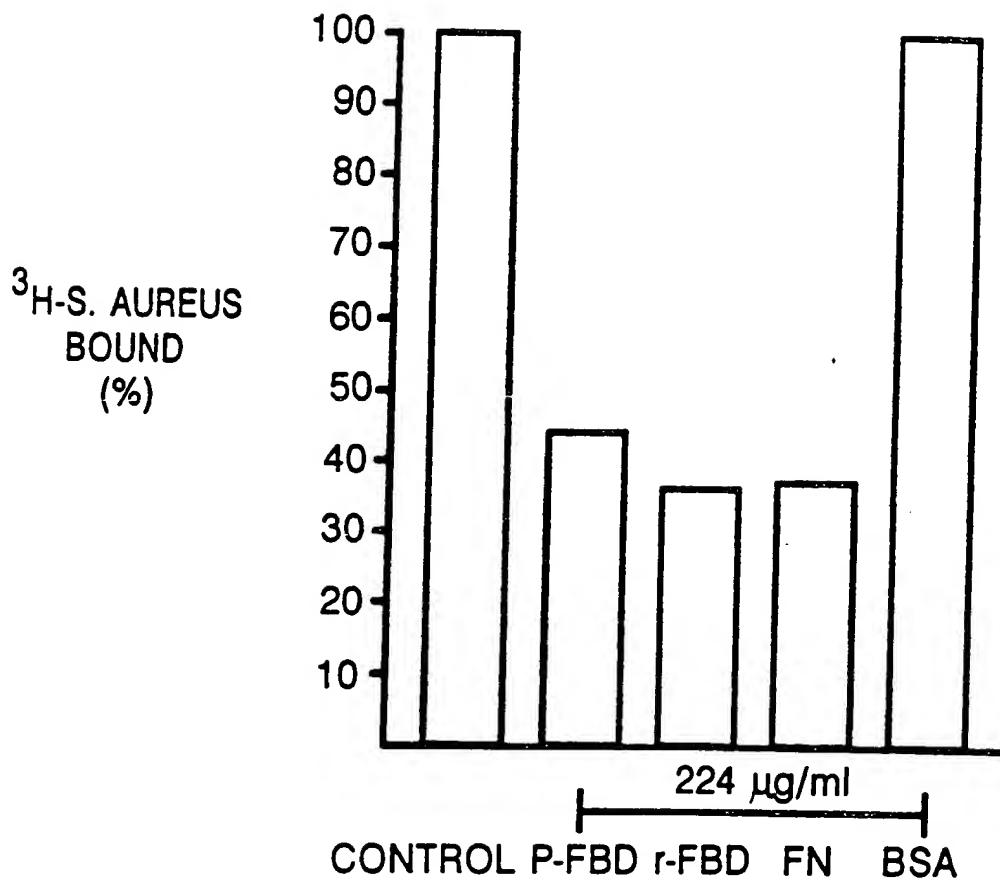


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FIGURE 26



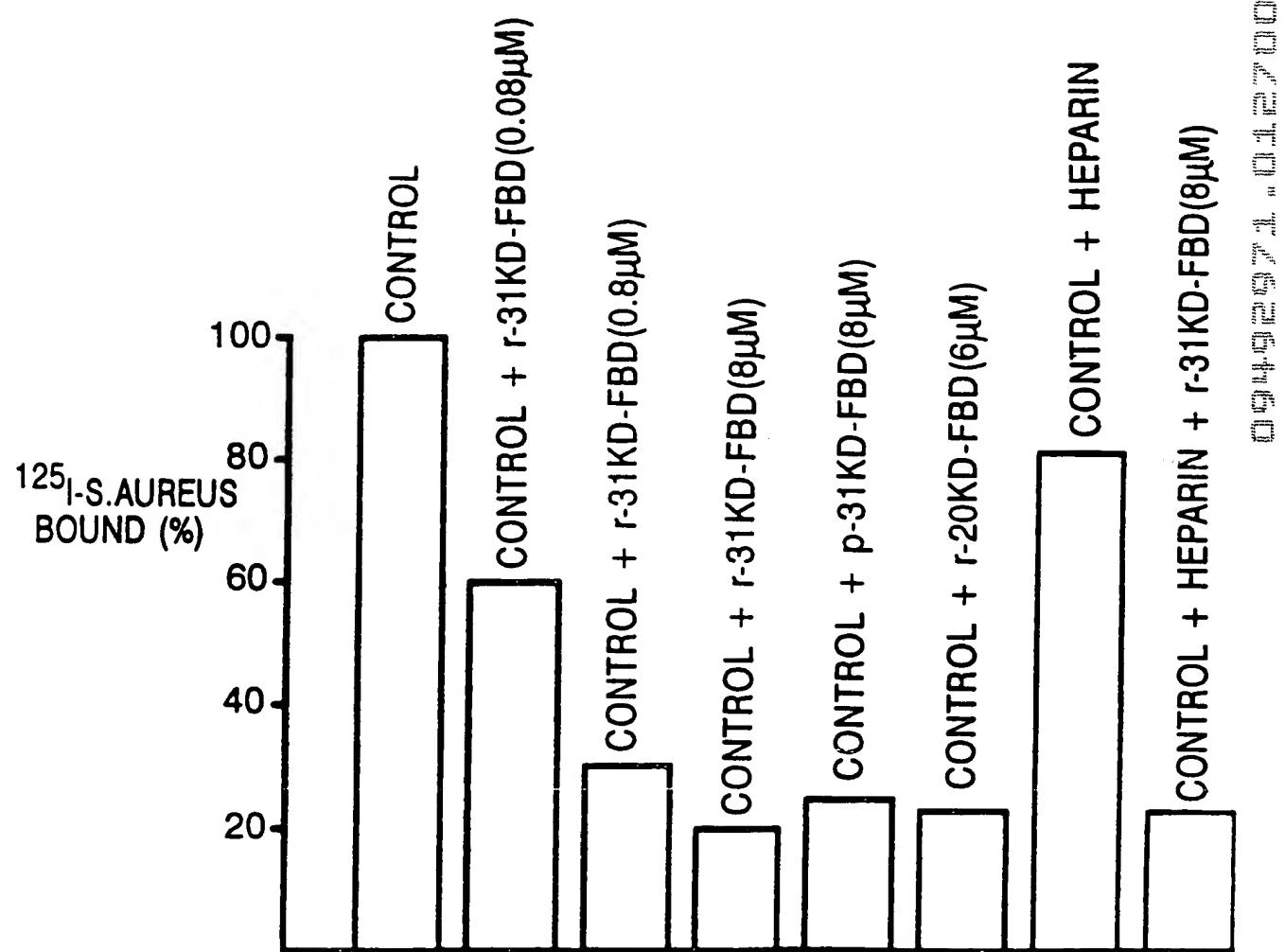
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FIGURE 27



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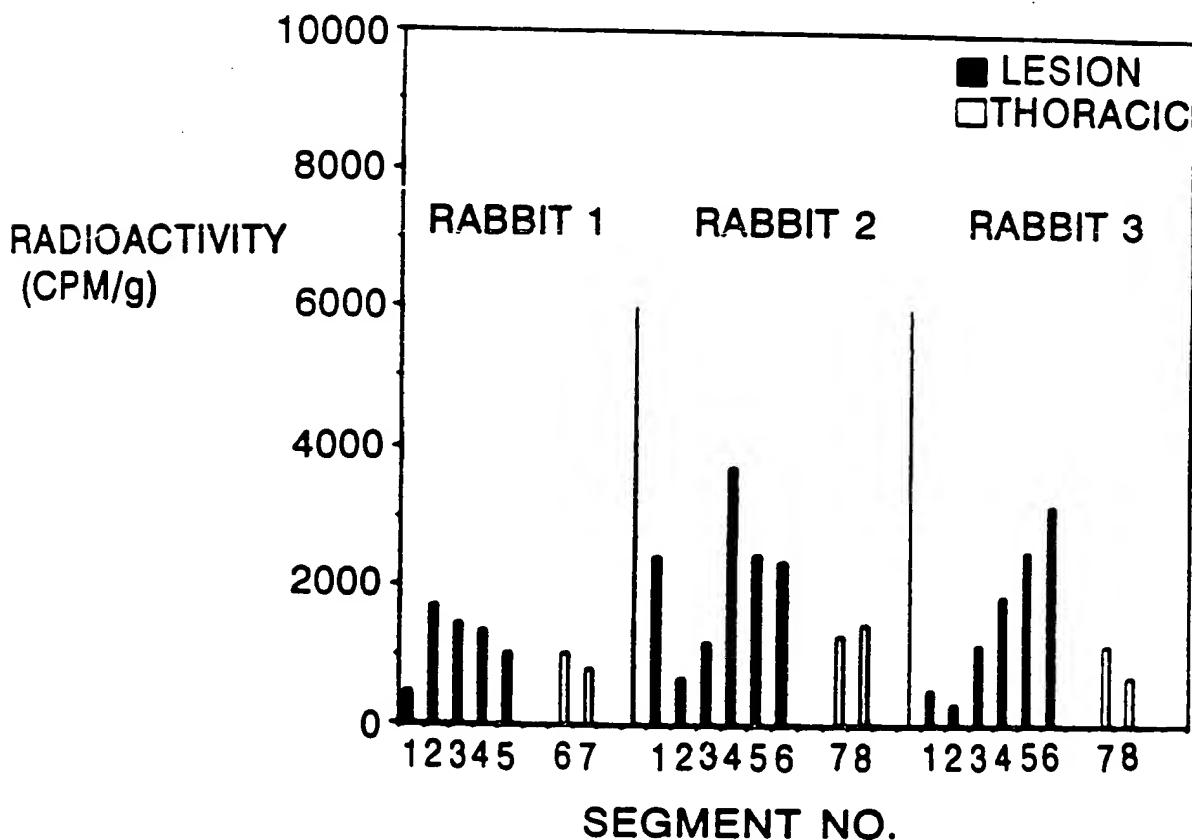
FIGURE 28



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FIGURE 29A

DISTRIBUTION OF RADIOACTIVITY IN RABBIT AORTA
SEGMENTS AFTER FN ADMINISTRATION



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FIGURE 29B

DISTRIBUTION OF RADIOACTIVITY IN RABBIT AORTA
SEGMENTS AFTER 31kD FBD ADMINISTRATION

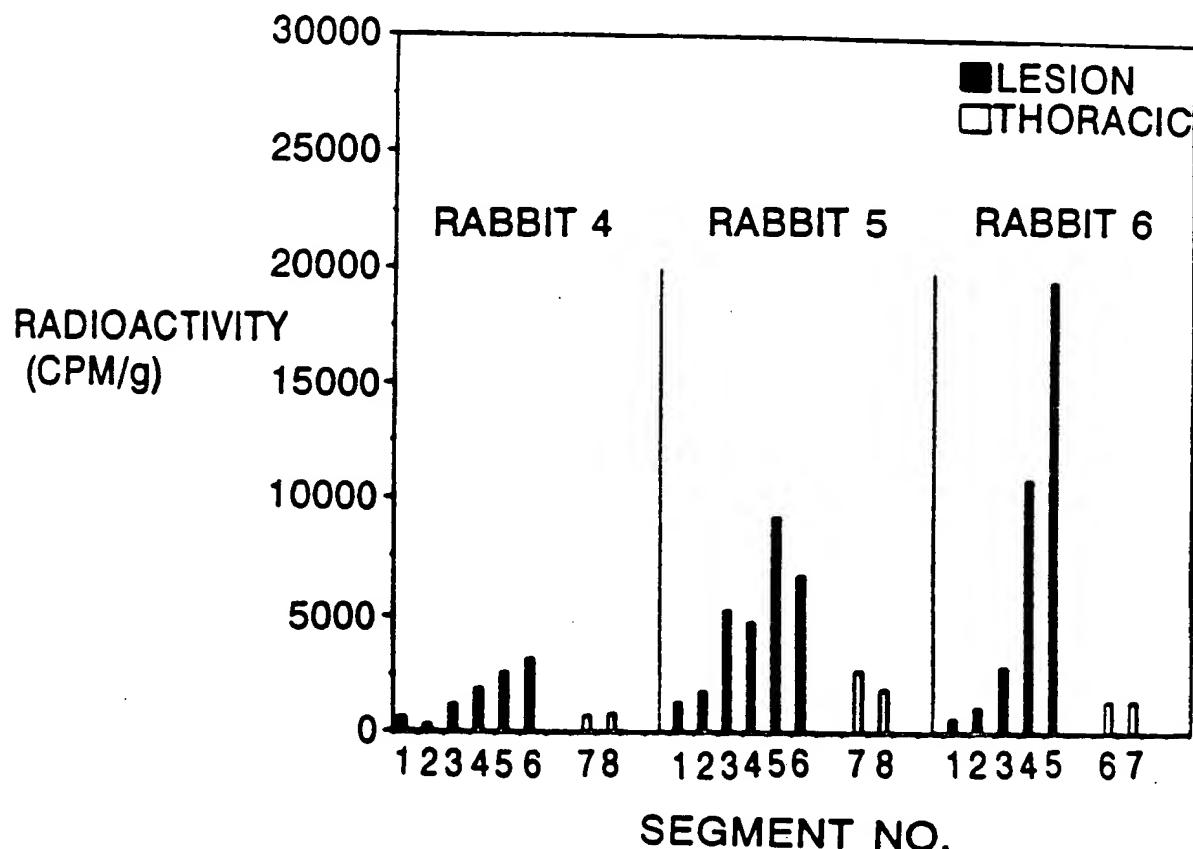


FIGURE 30

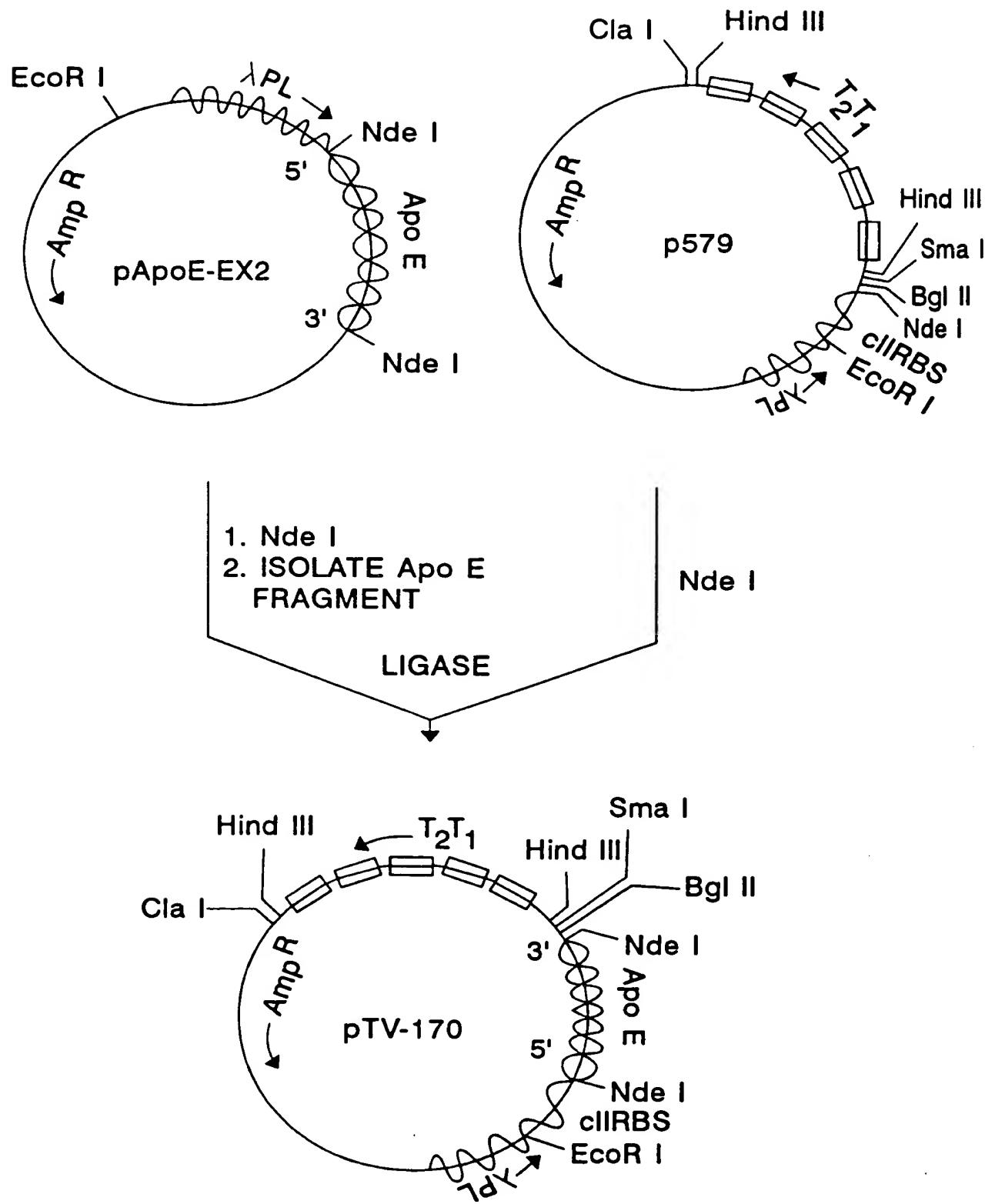


FIGURE 31

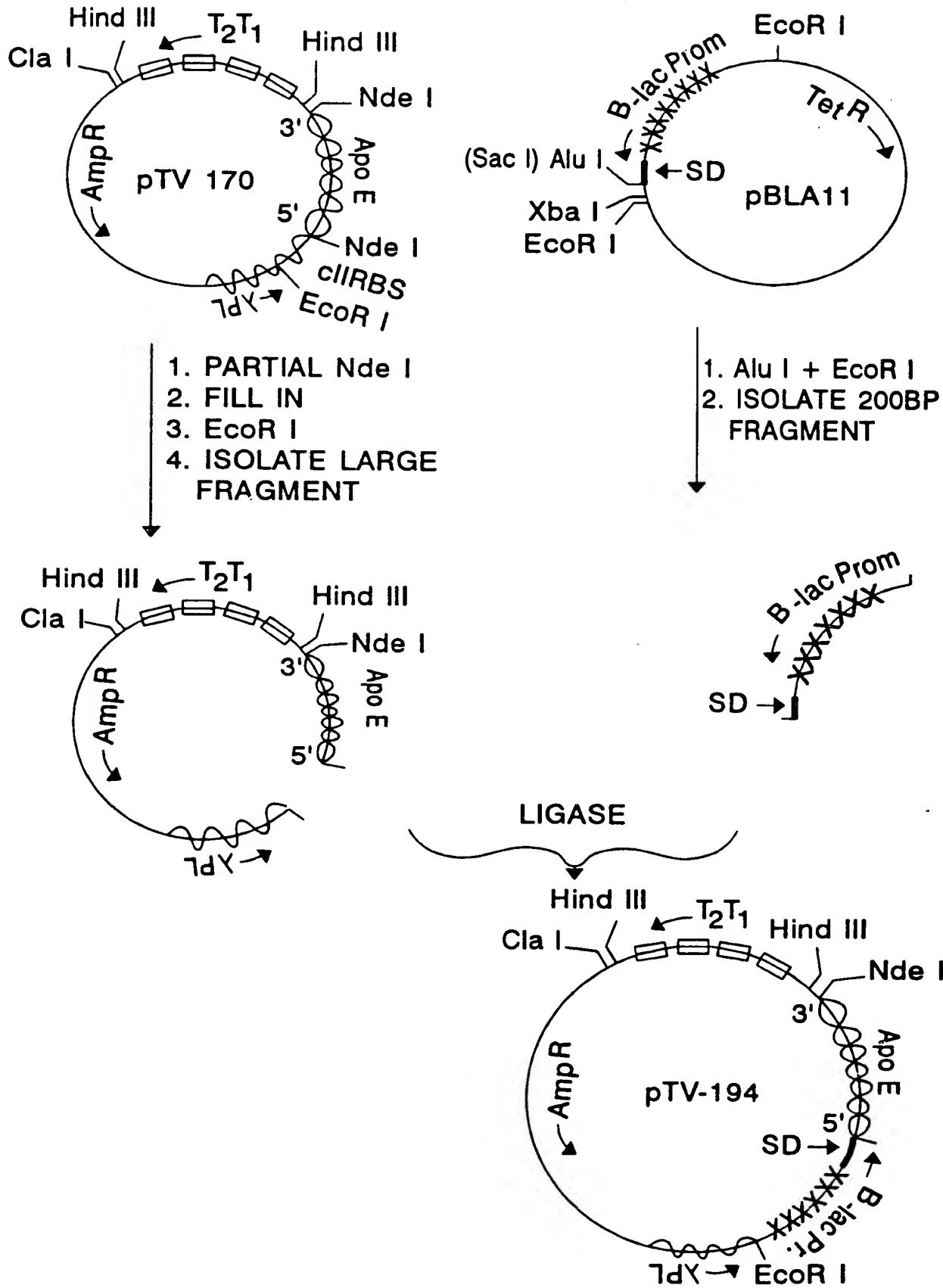
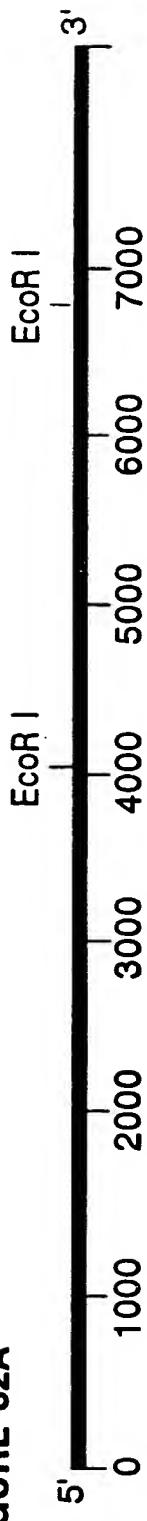
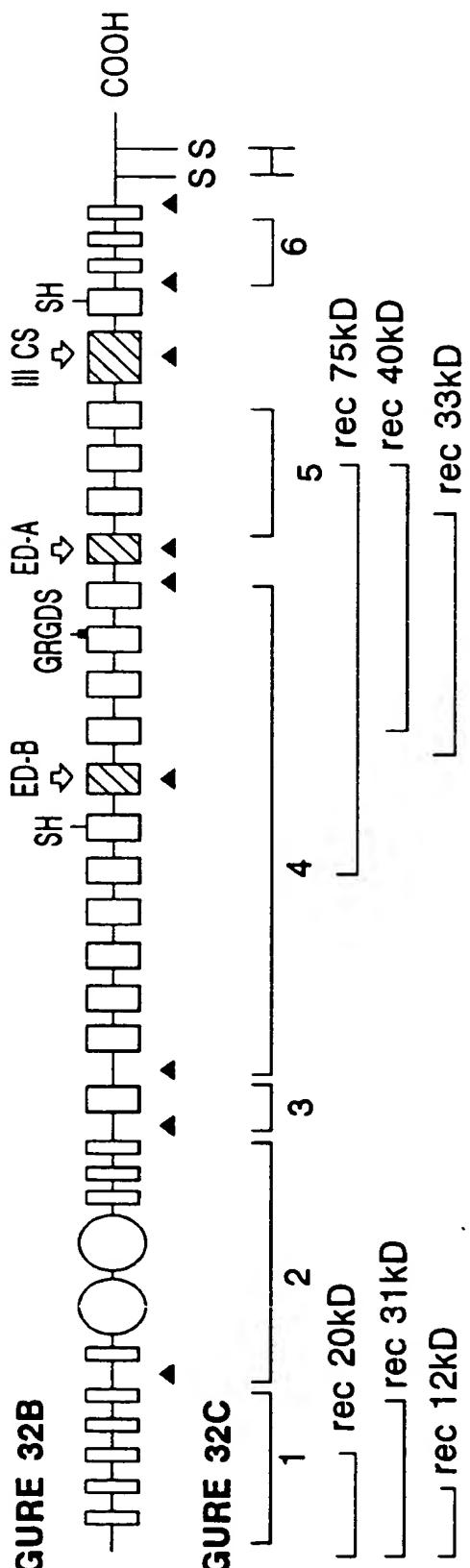
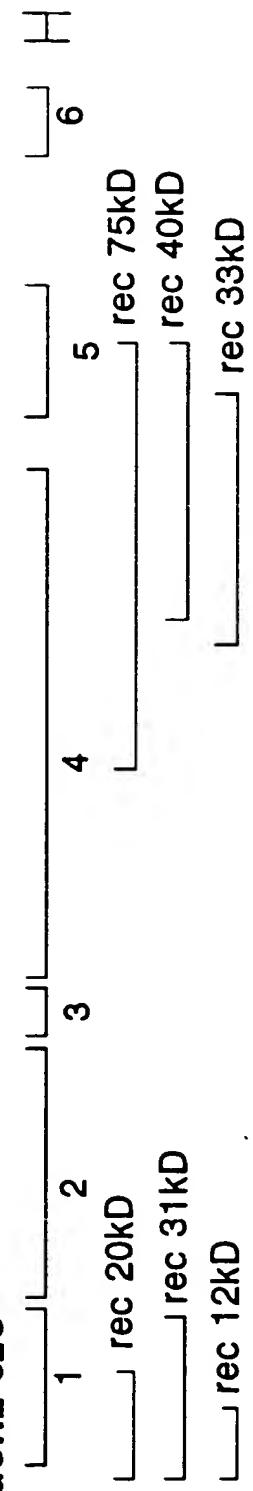


FIGURE 32A**FIGURE 32B****FIGURE 32C****FIGURE 32D**
HEPARIN COLLAGEN [HEPARIN
S. AUREUS DNA]
 CELL
 HEPARIN
 DNA
 FIBRIN

HEPARIN [CELL] FIBRIN
DNA

FIGURE 32E

NUCLEOTIDES

FBD	[rec-12kD: 14-340 rec-20kD: 14-472 rec-31kD: 14-799 rec-40kD: 4151-5566 rec-75kD: 3317-5566 rec-33kD: 3998-5179]
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□ 9 11 9 20 9 7 11 10 12 37 10 10

FIGURE 33

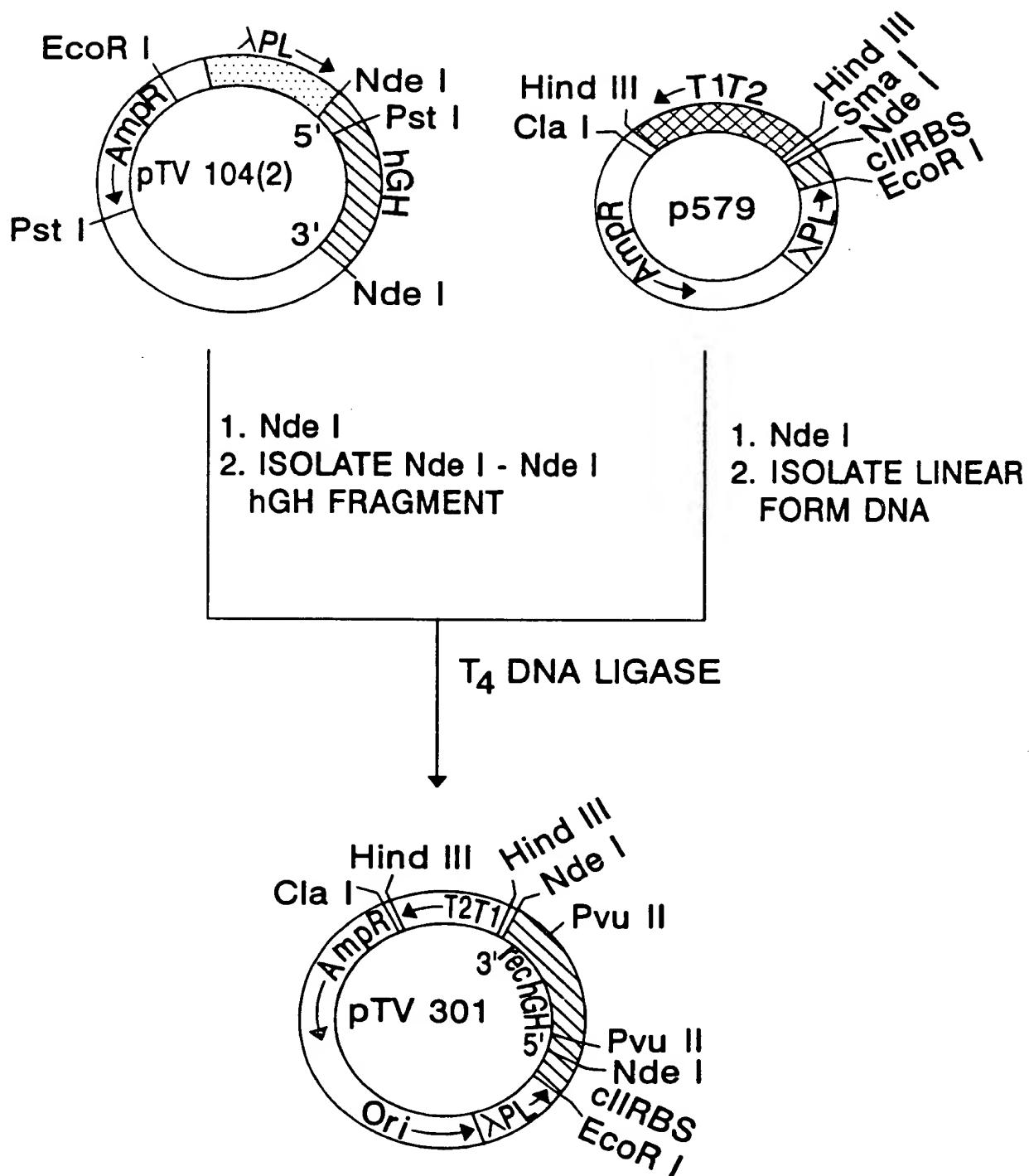


FIGURE 34

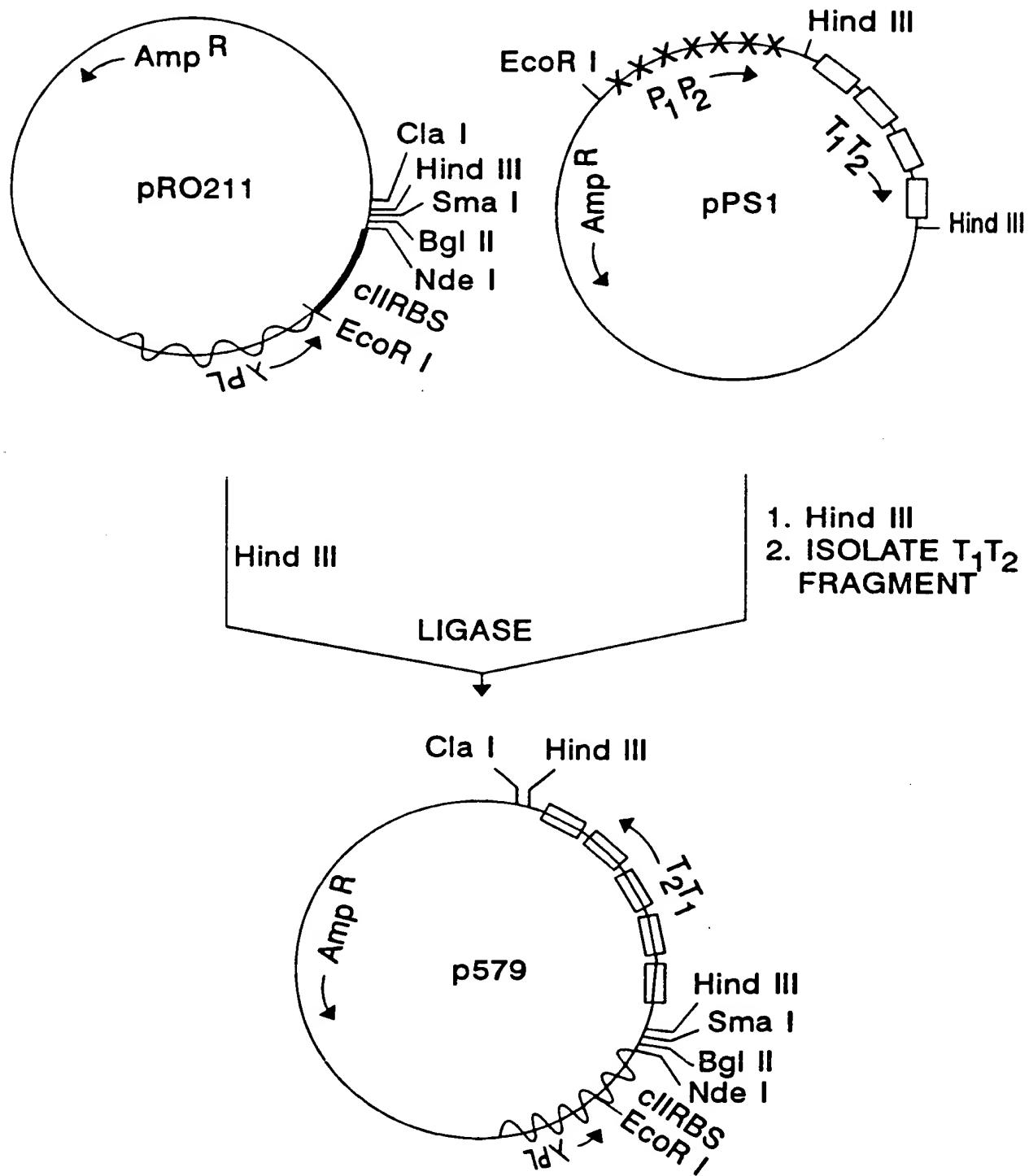
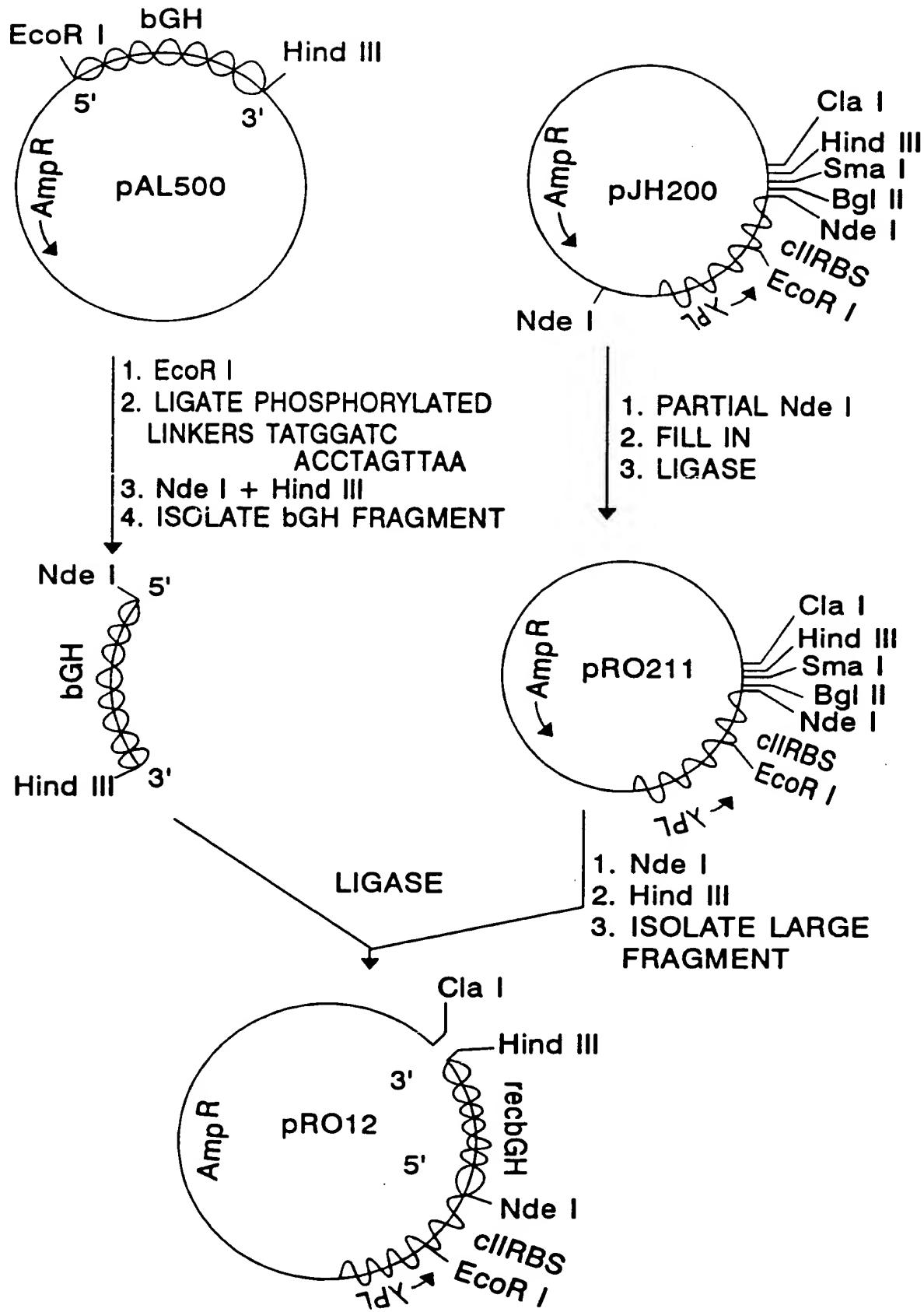
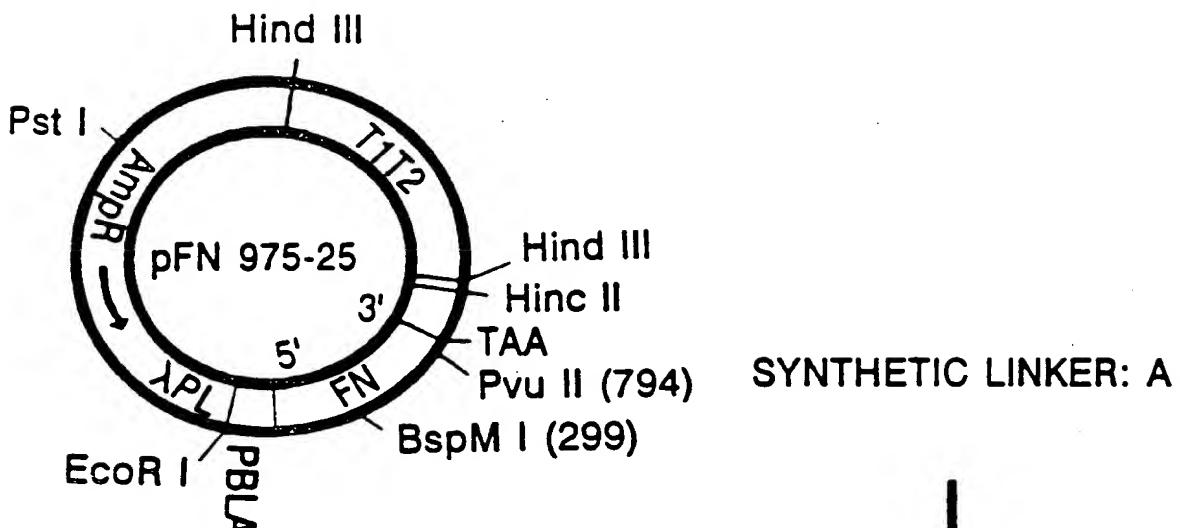


FIGURE 35

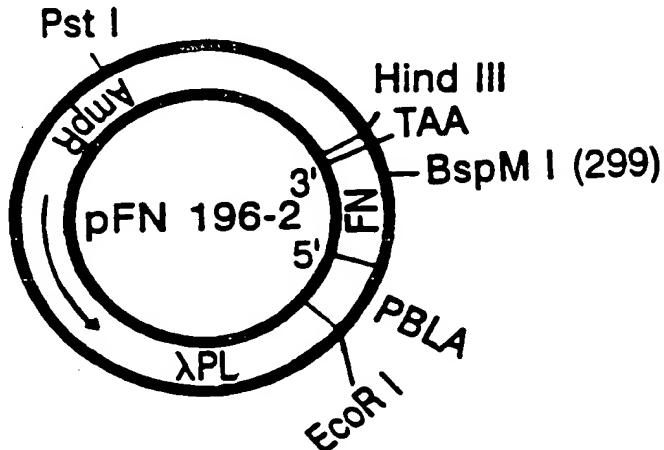


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FIGURE 36

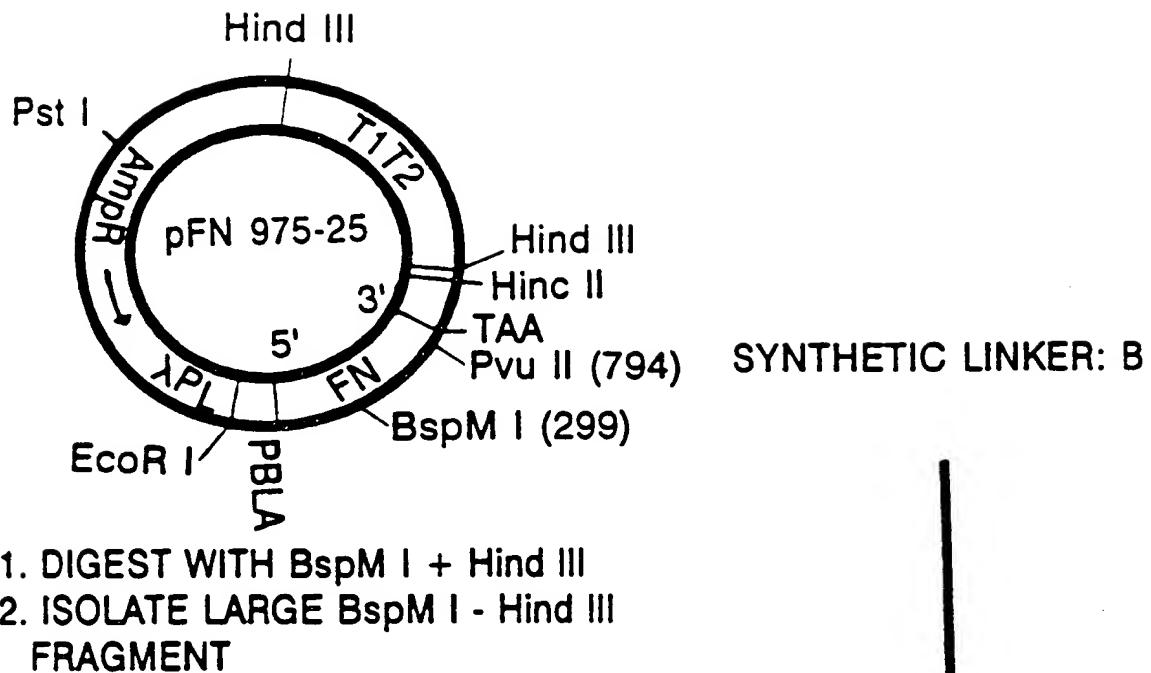


1. DIGEST WITH *Bsp* M I + *Hind* III
2. ISOLATE LARGE *Bsp* M I - *Hind* III
FRAGMENT

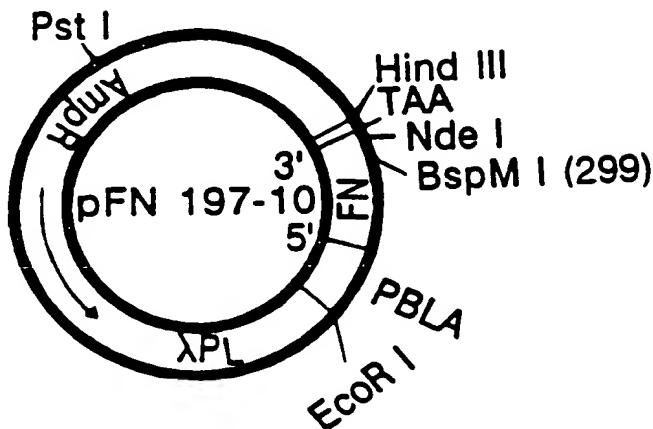
T₄ DNA LIGASE



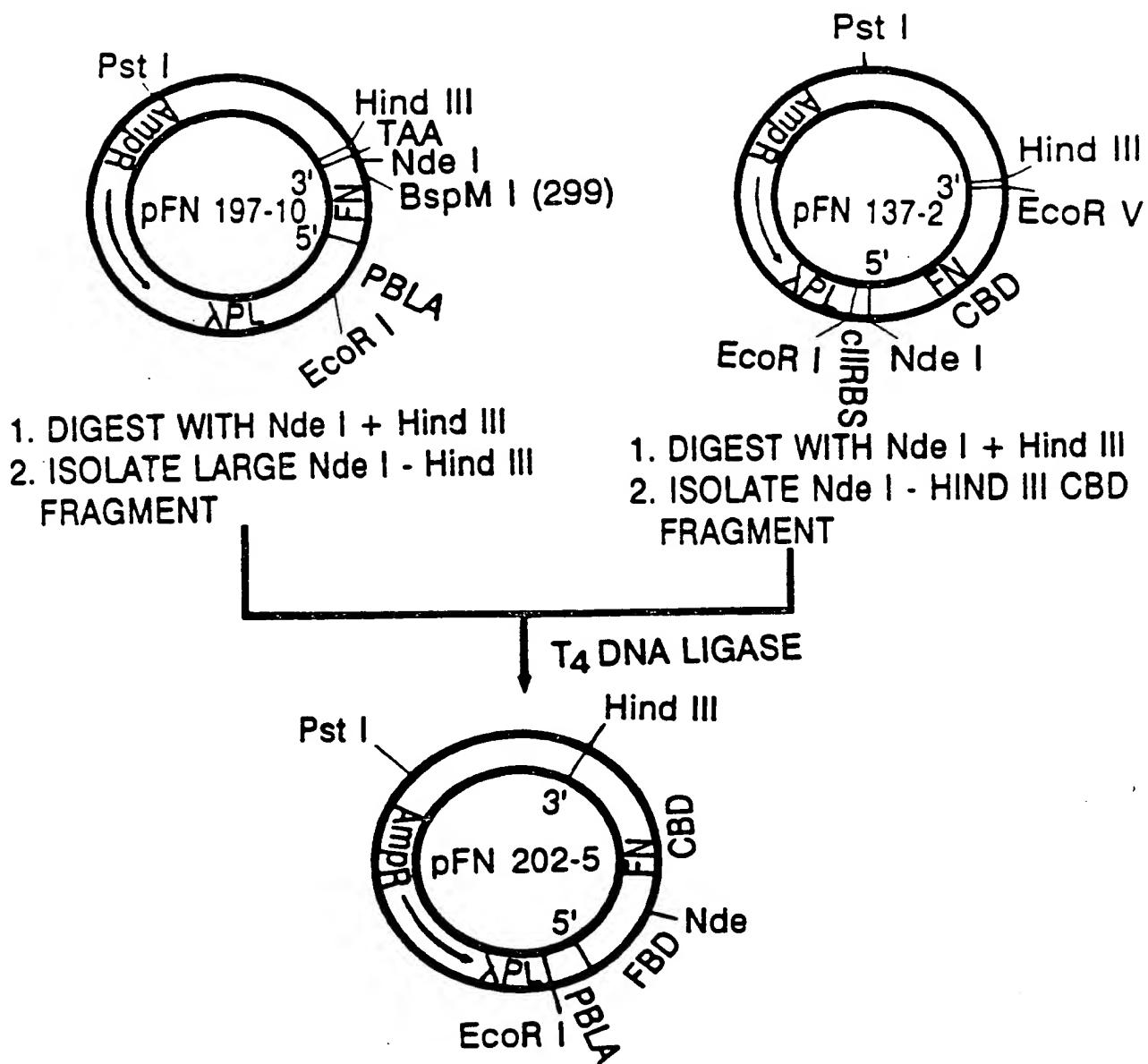
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FIGURE 37



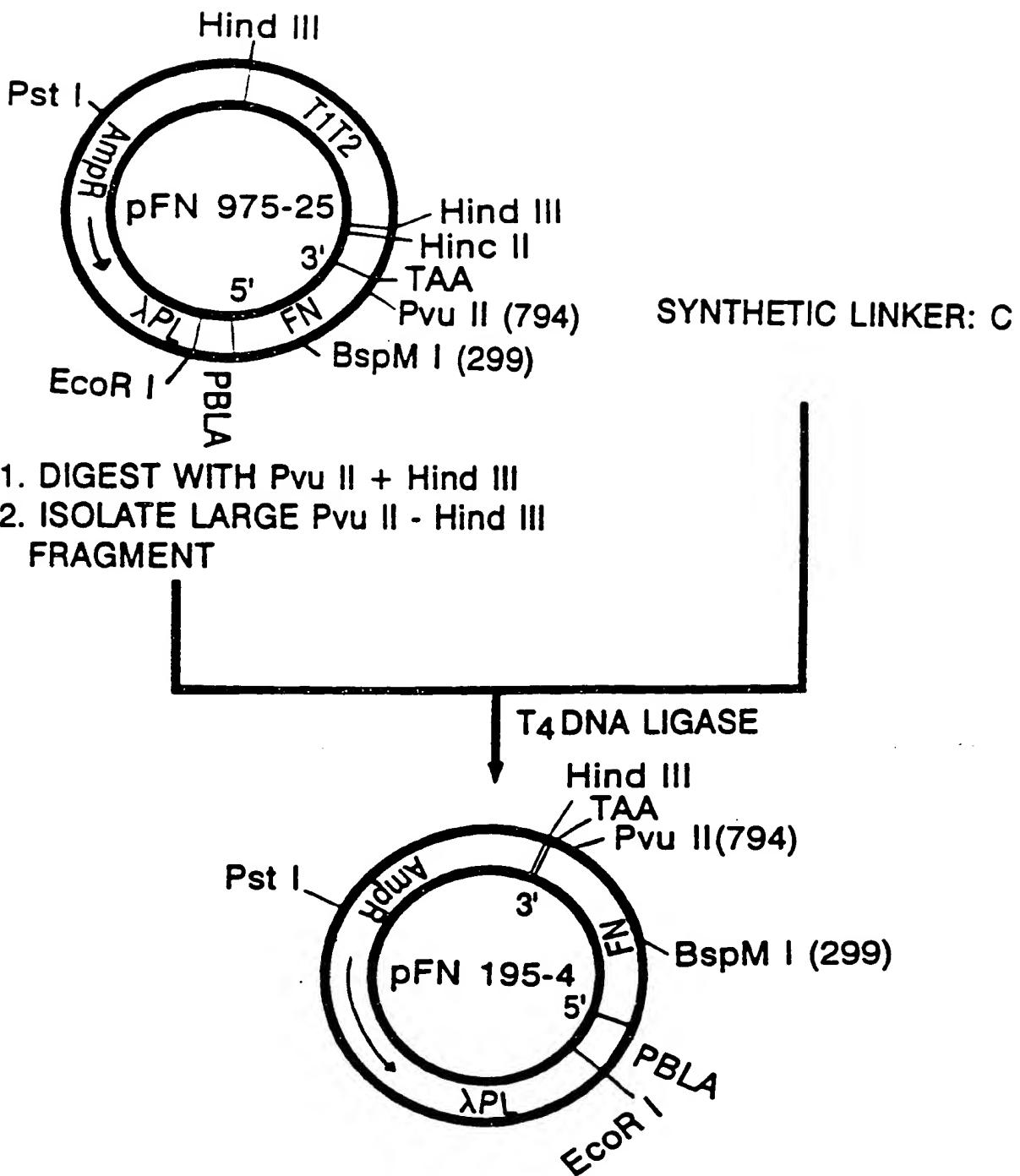
T₄ DNA LIGASE



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FIGURE 38



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FIGURE 39



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FIGURE 40

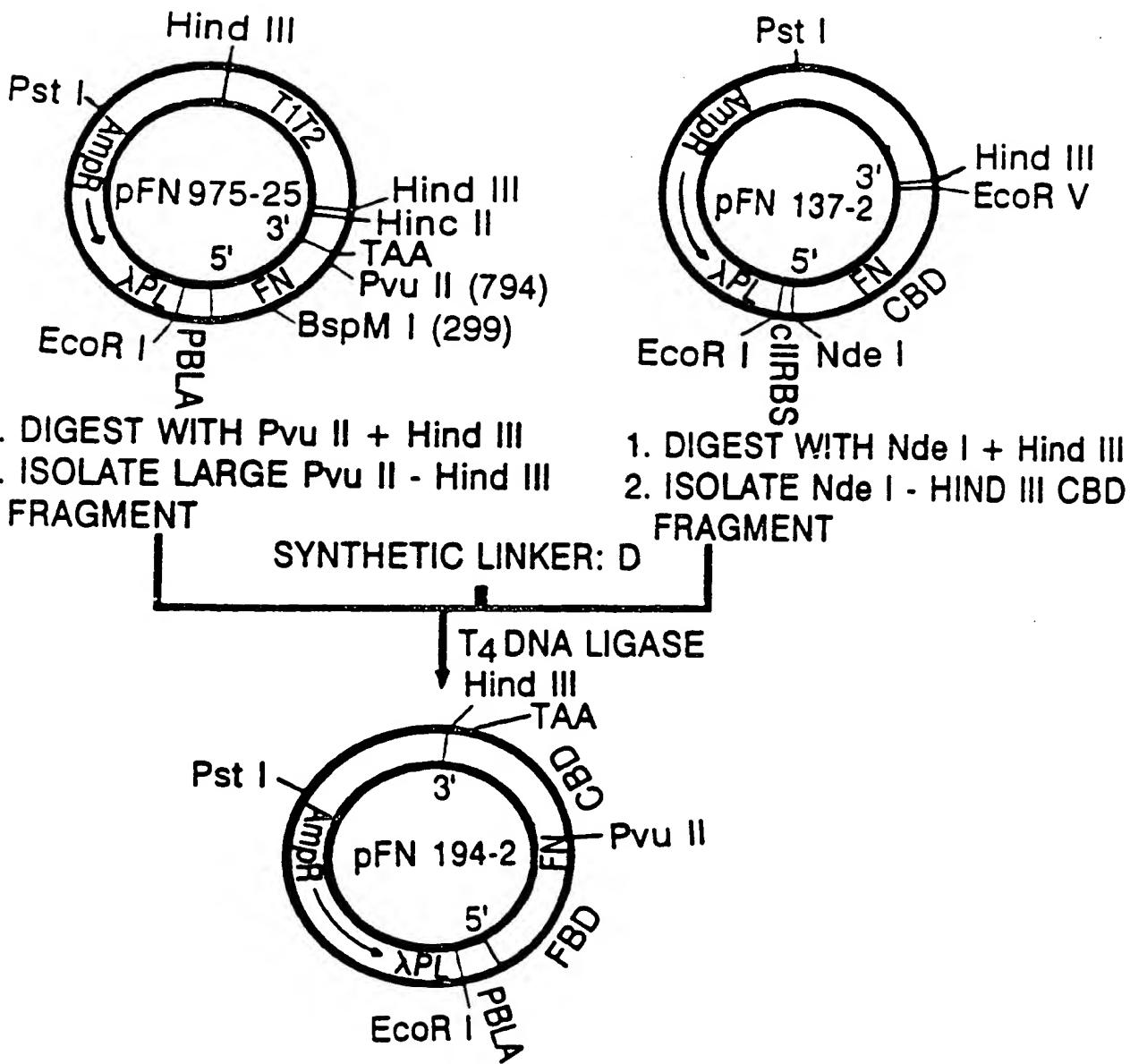


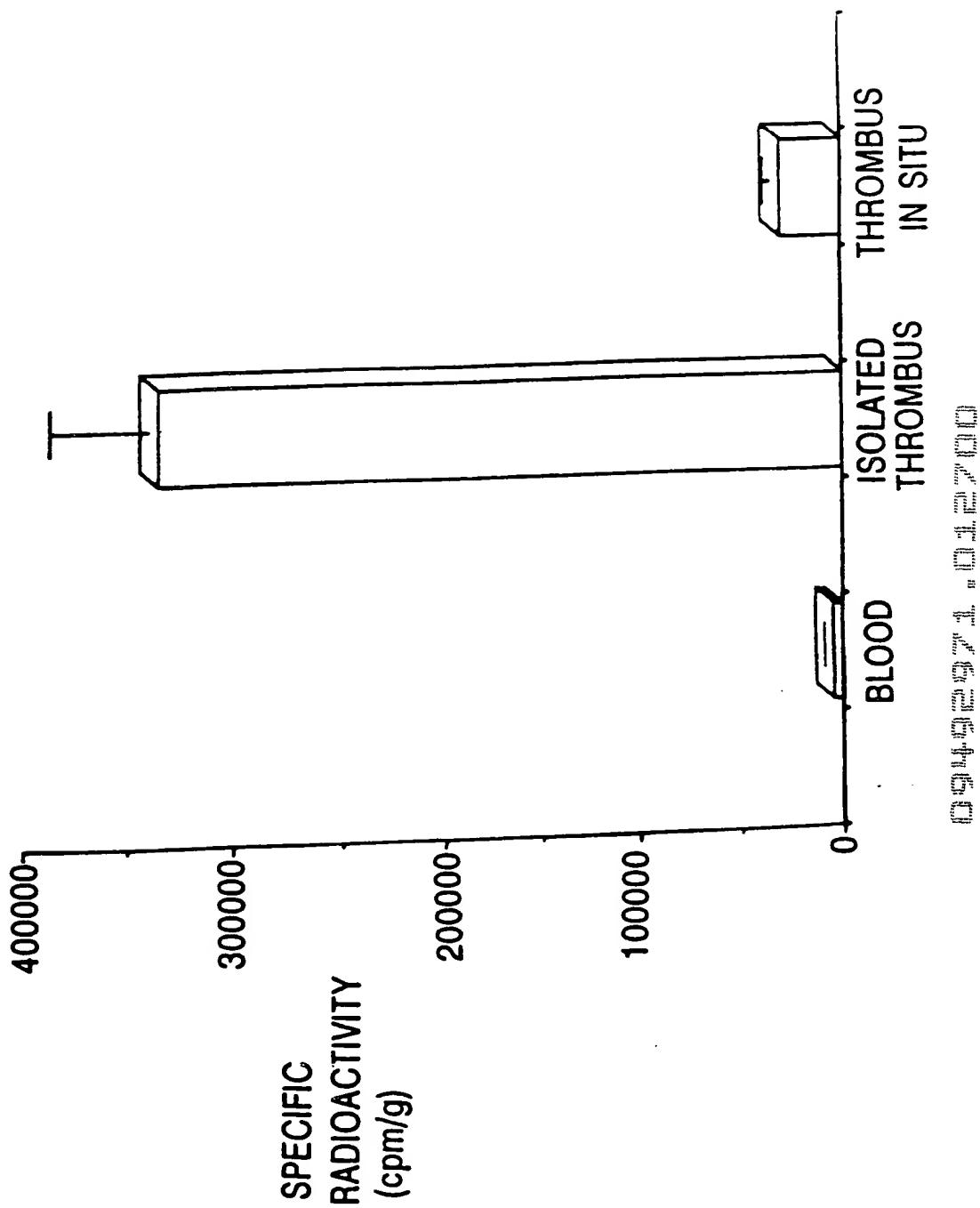
FIGURE 41

A	5' 3'	GGGCTGGCCAGGGAGAATAAGCTGTACCCATCGCAAACCGCTAACAGCTGA ACCCGCTCCCTCTTATTGACATGGTAGCGTTTGGCGATTGTCGACTTCGA	3' 5'
B	5' 3'	GGGCTGGCCAGGGAGAATAAGCTGTACCCATCGCAAACCGCCATATGTAAA ACCCGCTCCCTCTTATTGACATGGTAGCGTTTGGCGGTATACATTGTCGA	3' 5' 86
C	5' 3'	ATGGCCGTGGAGACAGCTAACAGCTGA TACCGGCACCTCTGTCGATTGTCGACTTCGA	3' 5'
D	5' 3'	CTGTATAACCAACC GACATATGGTTGGAT	3' 5'

0 9 4 9 2 9 7 1 . 0 1 2 3 0 0

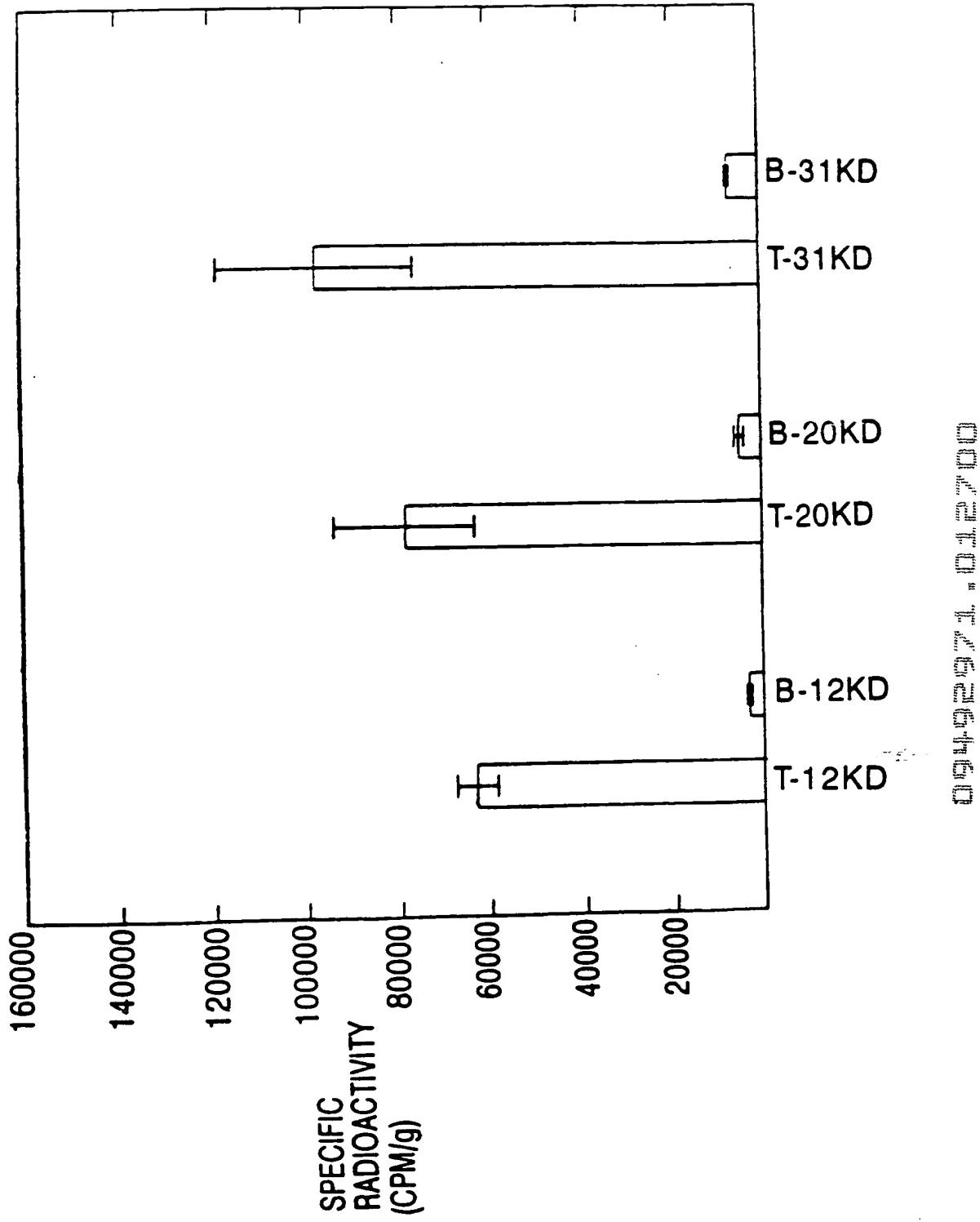
FIGURE 42

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FIGURE 43



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FIGURE 44

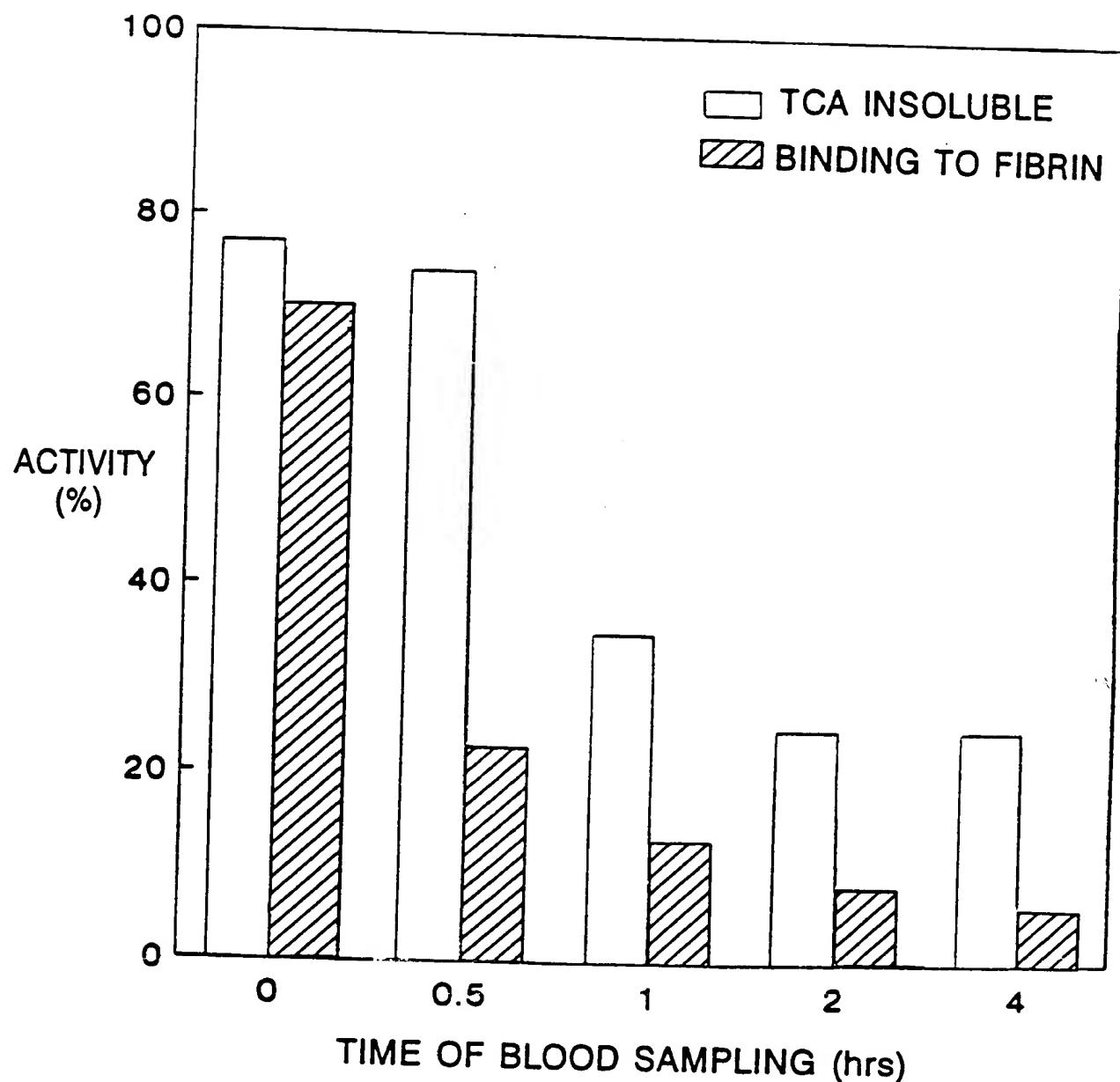


FIGURE 45

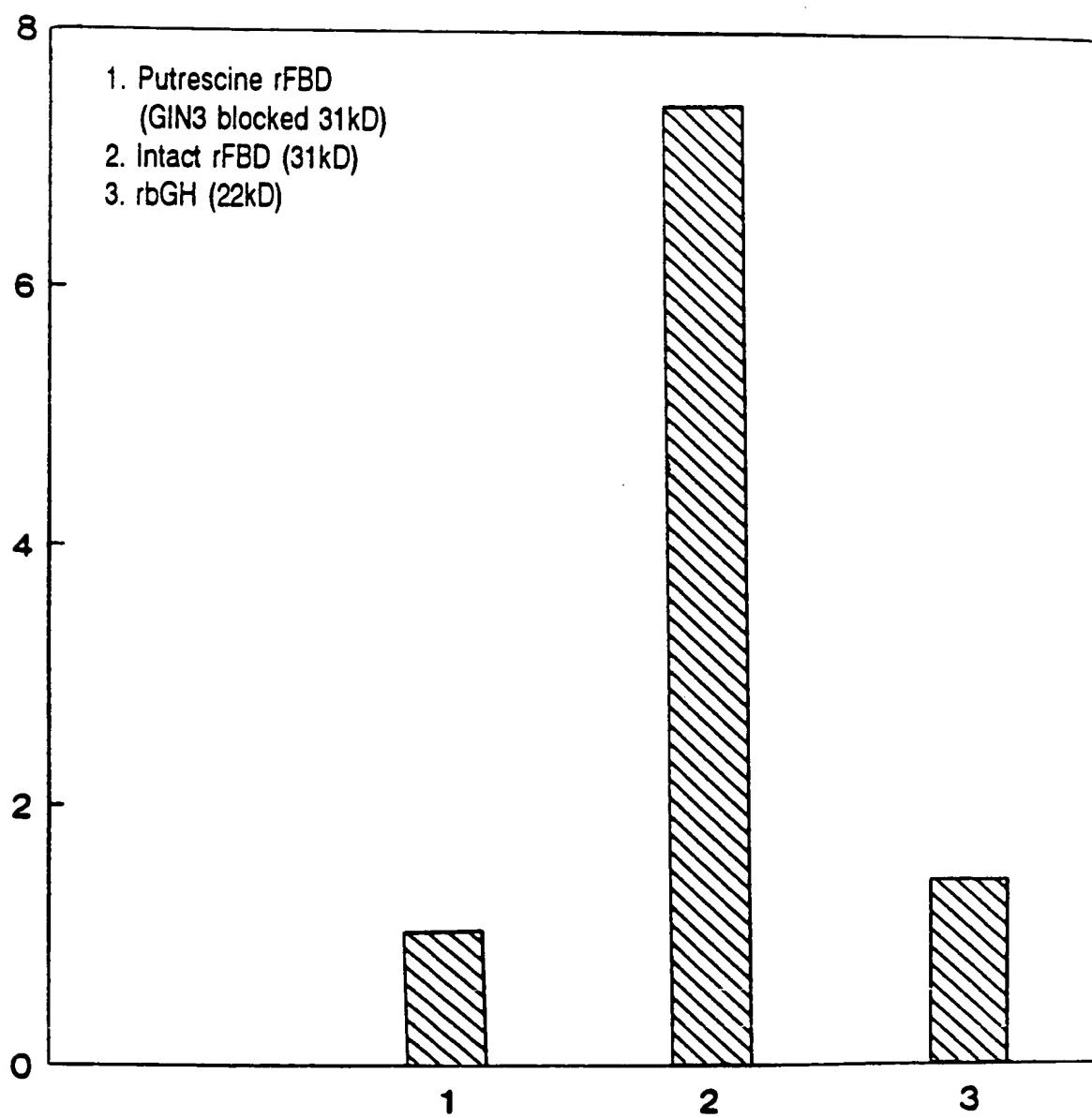


FIGURE 46A

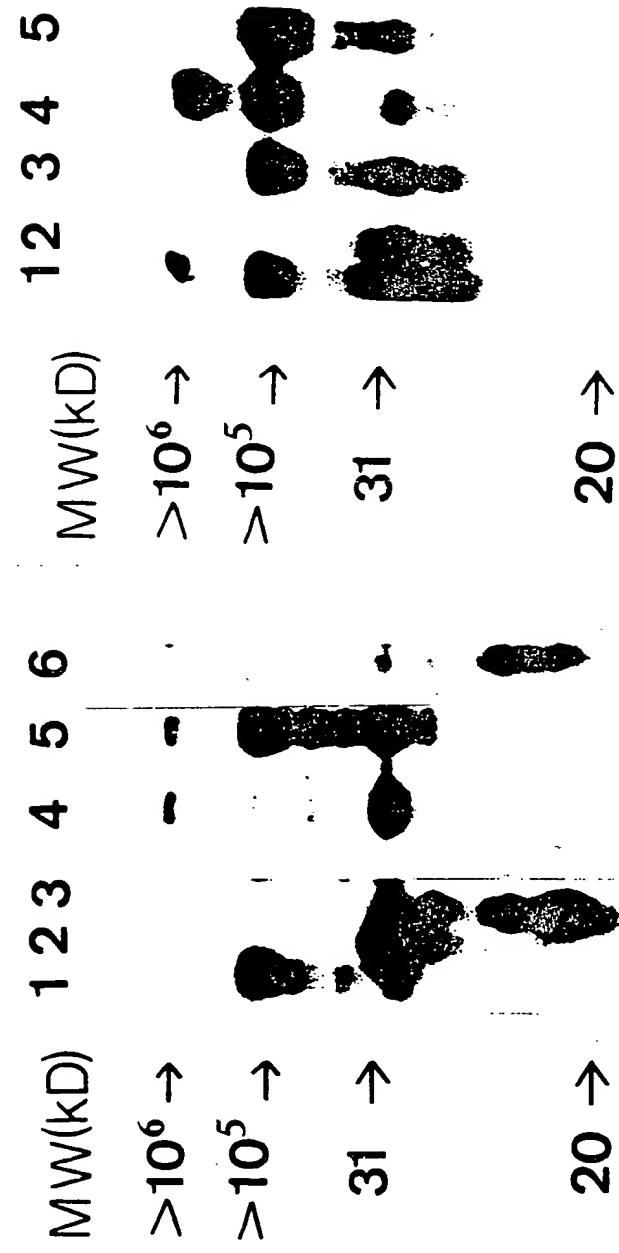
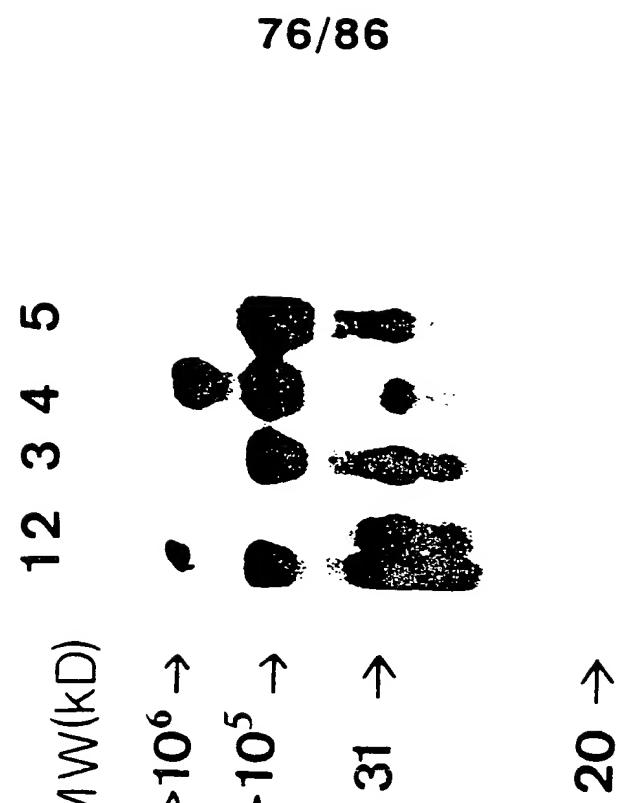


FIGURE 46B



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FIGURE 47A

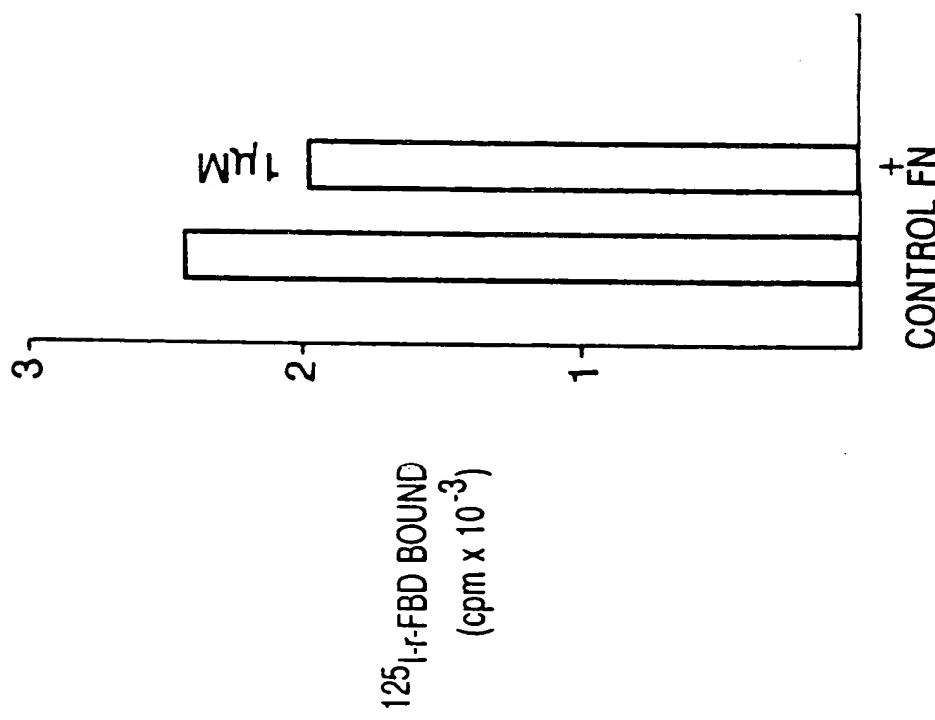
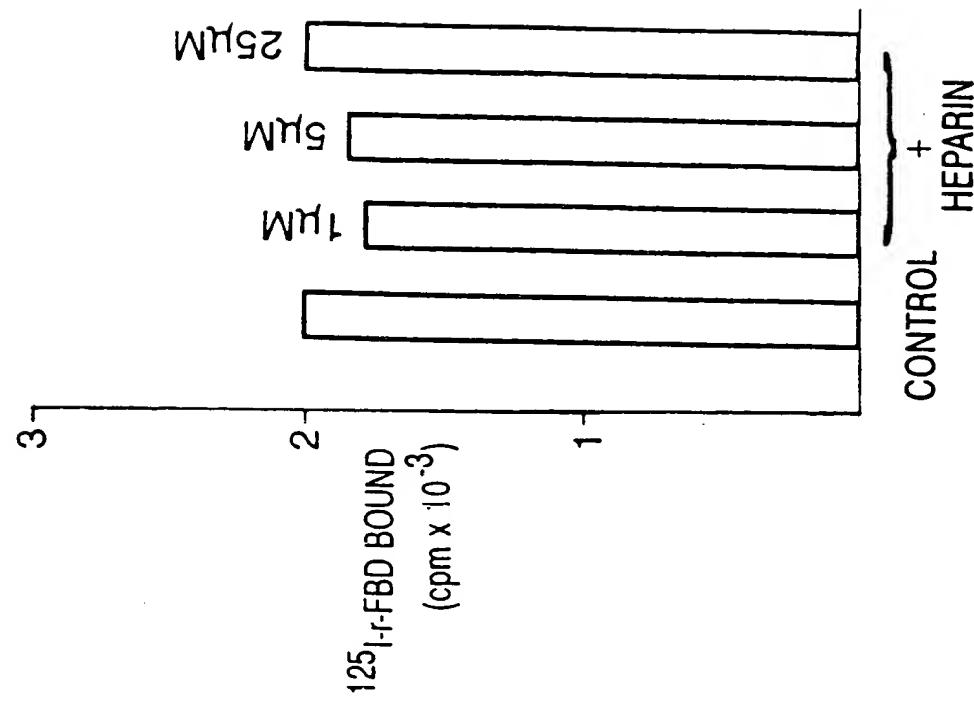


FIGURE 47B



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FIGURE 48

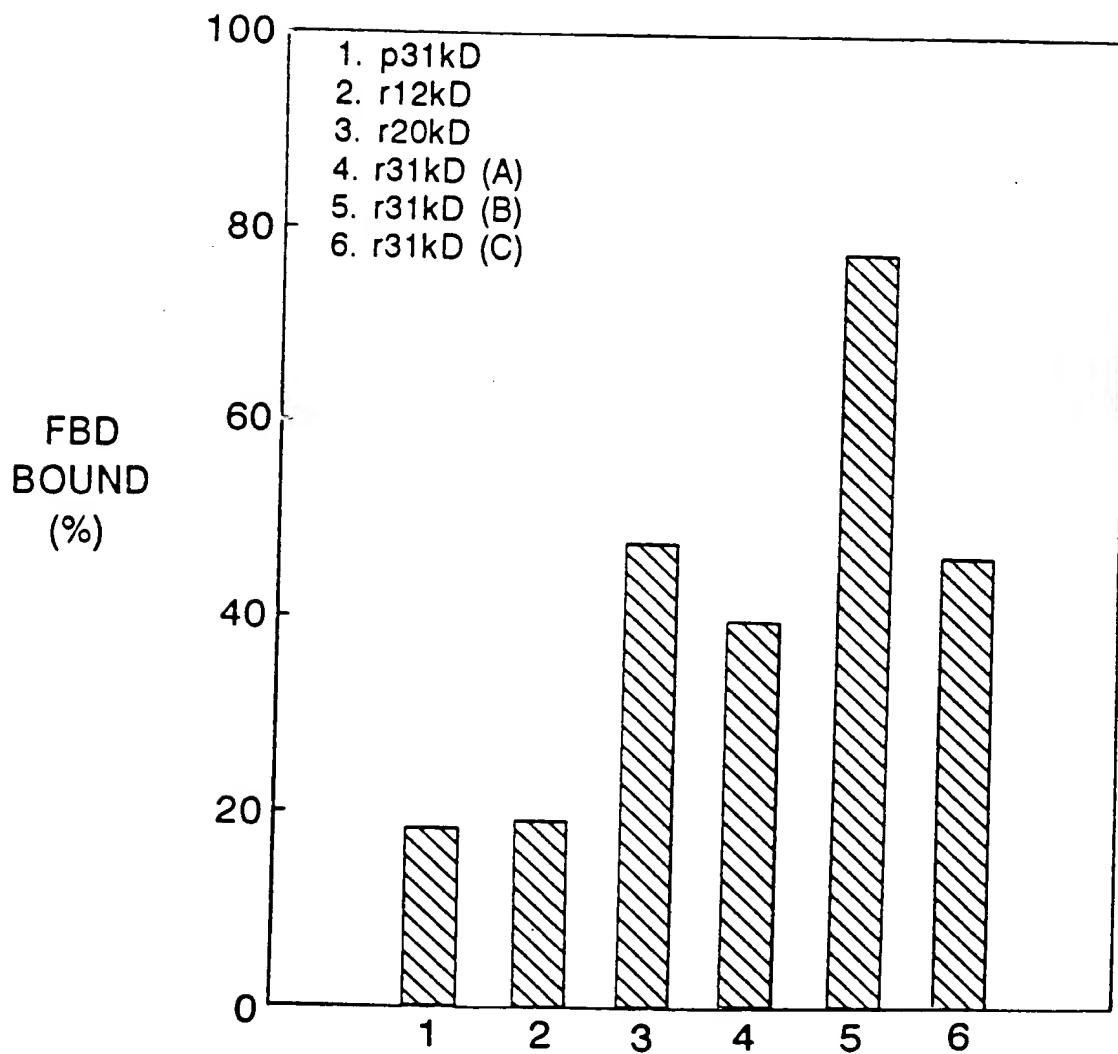
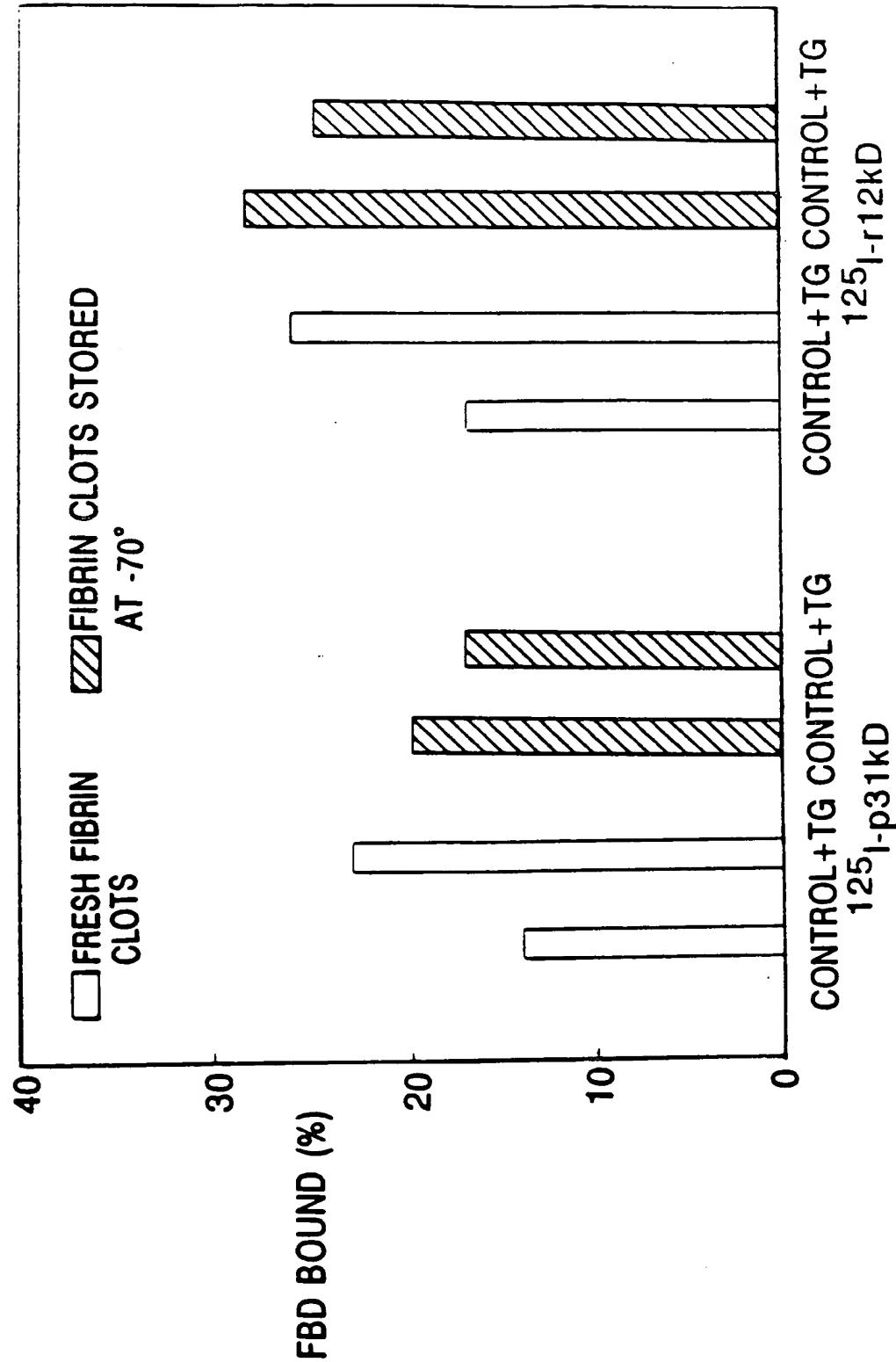


FIGURE 49

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125I-p31kD

FIGURE 50A

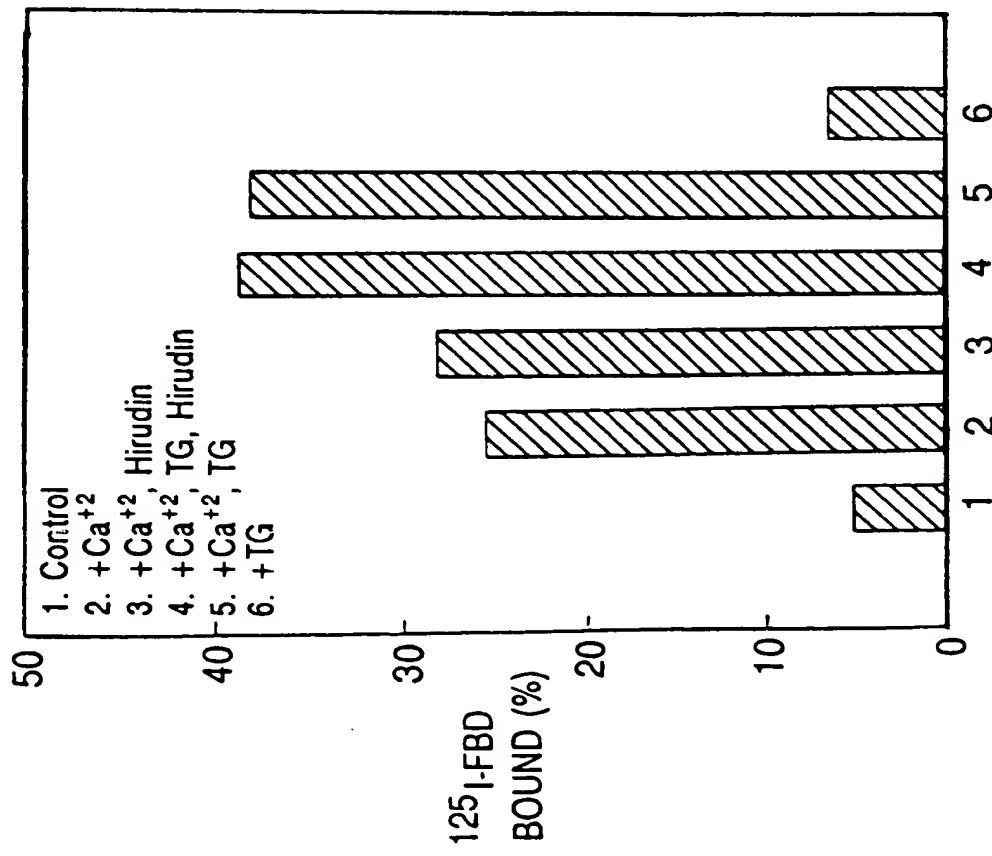
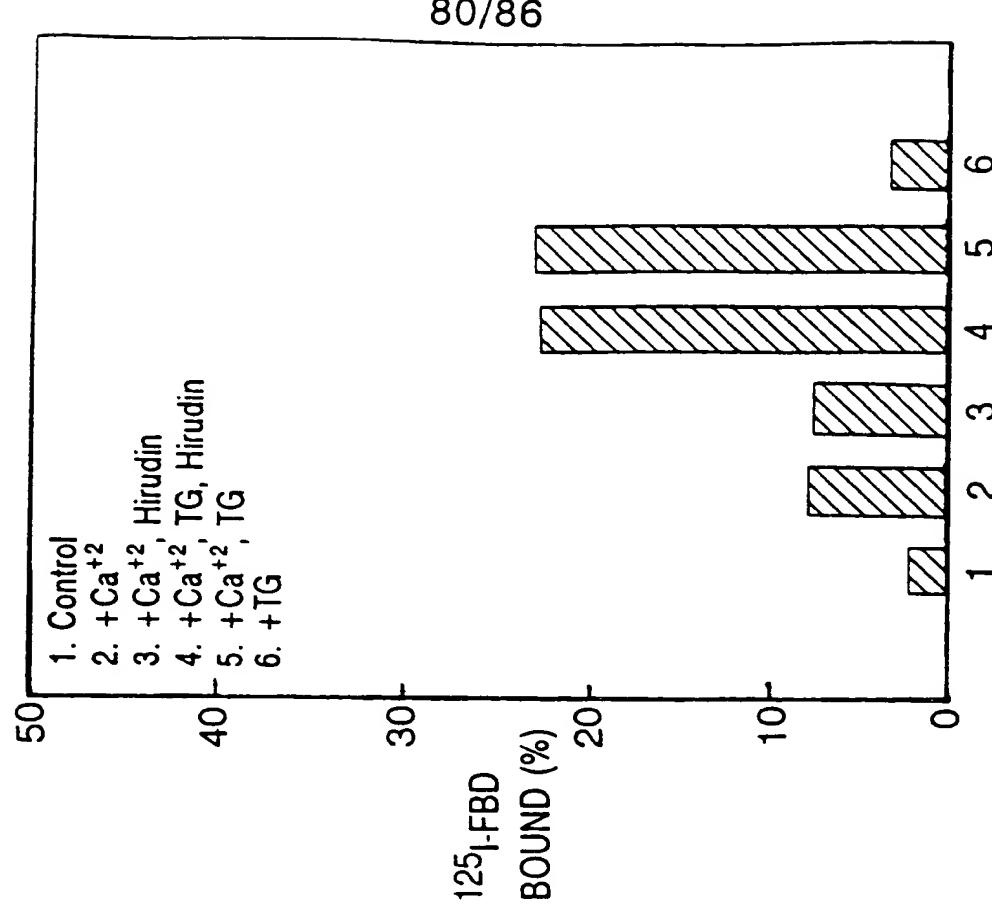
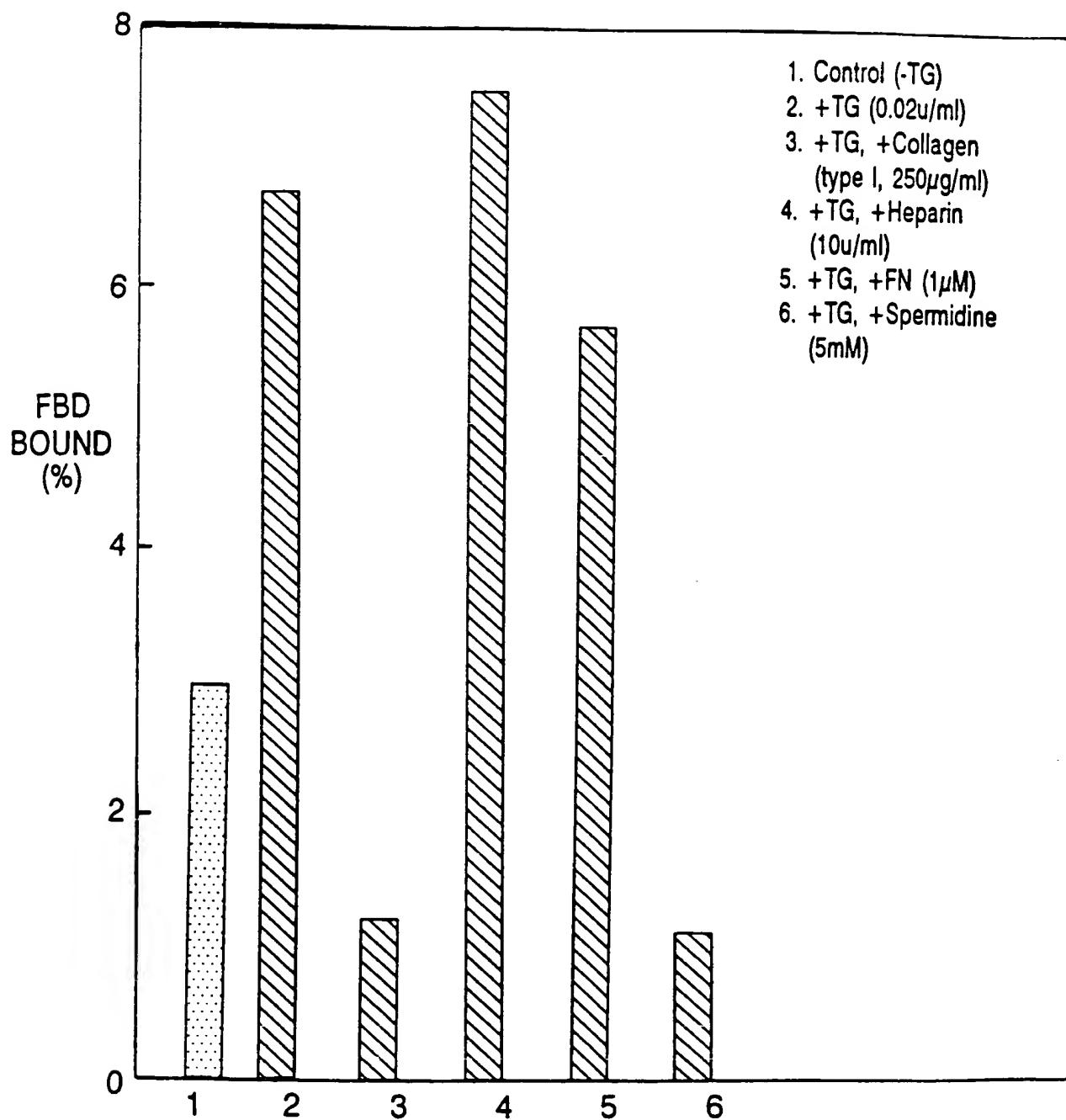


FIGURE 50B



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FIGURE 51



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FIGURE 52A-1

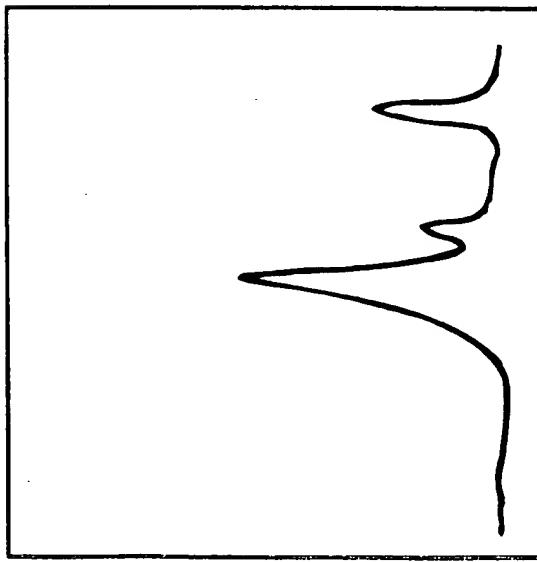


FIGURE 52A-2

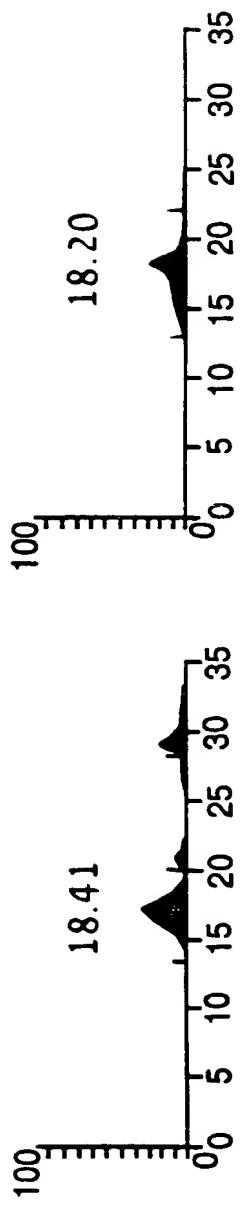
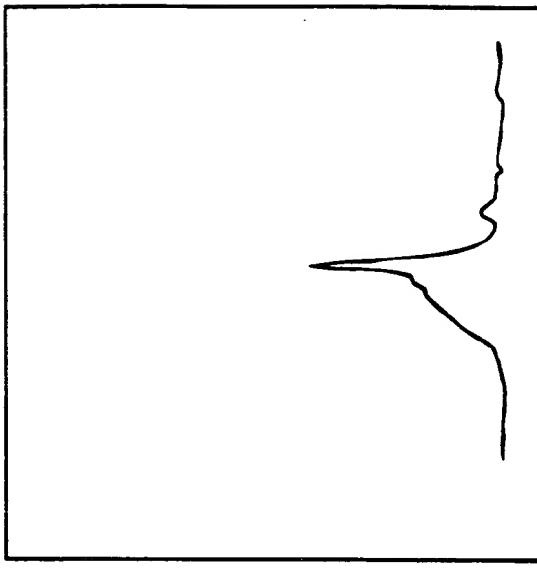


FIGURE 52B-2



0.1.2.3.4.5.6.7.8.9.0

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FIGURE 52C-1

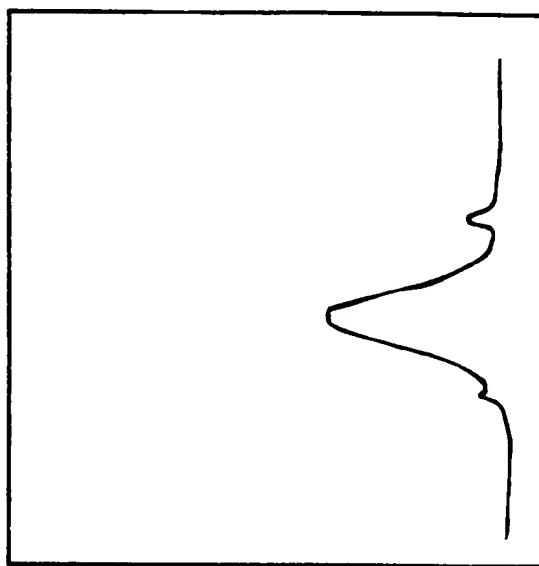


FIGURE 52C-2

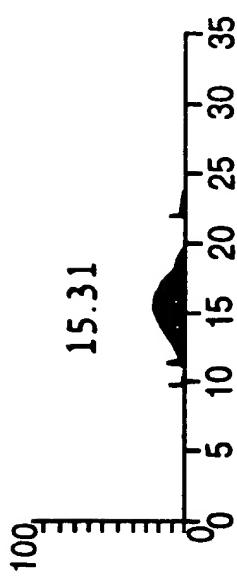


FIGURE 52D-1

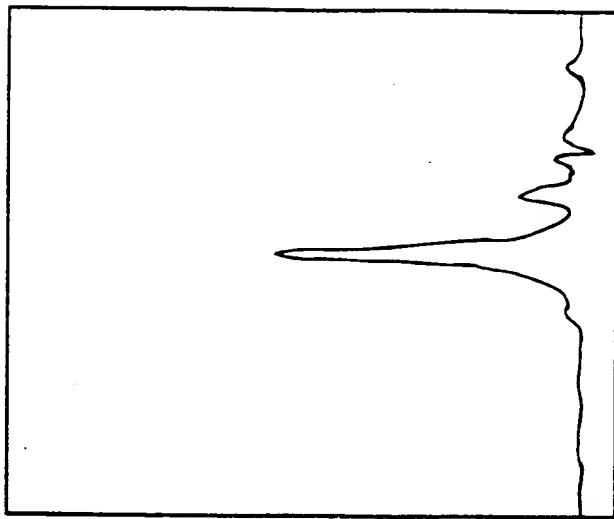
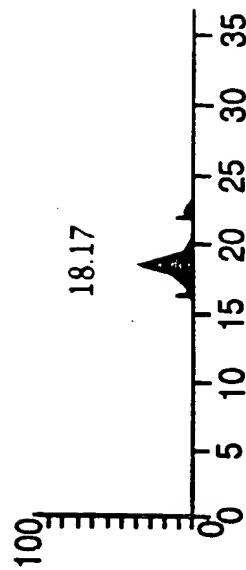


FIGURE 52D-2



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FIGURE 52E-1

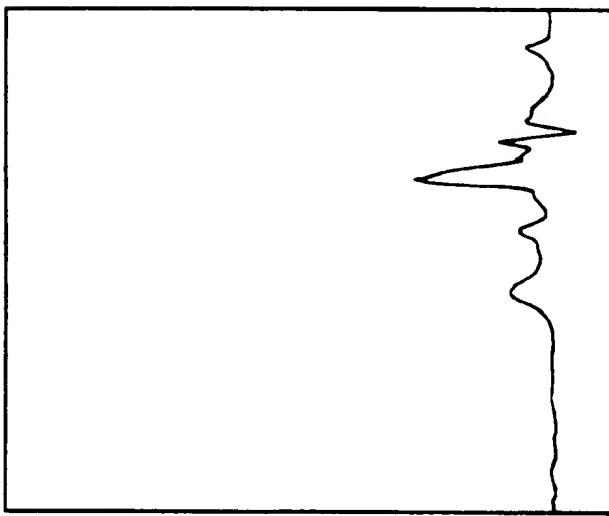


FIGURE 52F-1

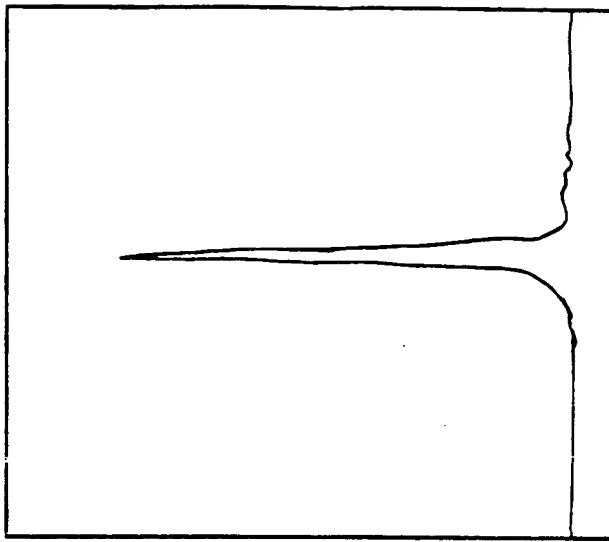


FIGURE 52E-2

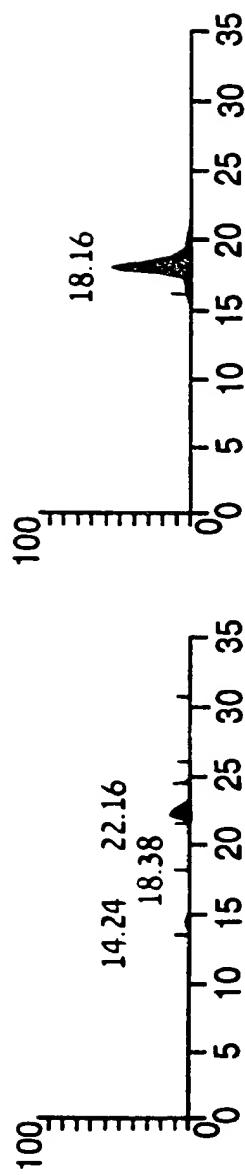


FIGURE 52F-2

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FIGURE 53A

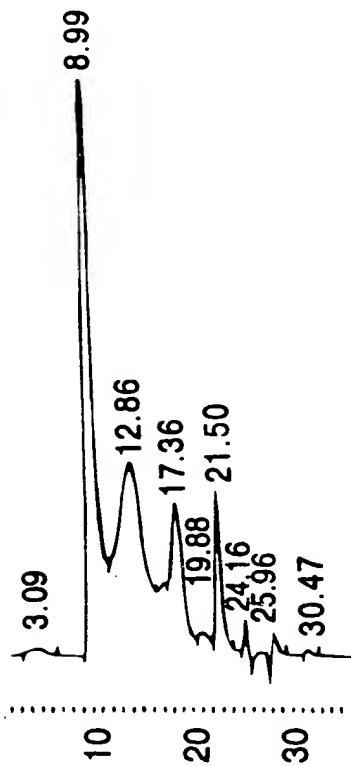


FIGURE 53B

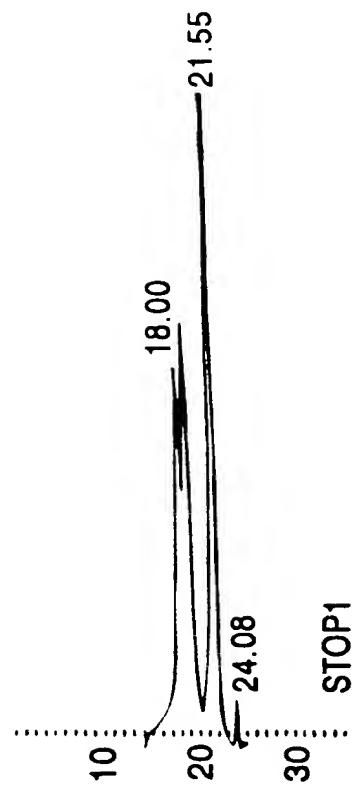


FIGURE 53C

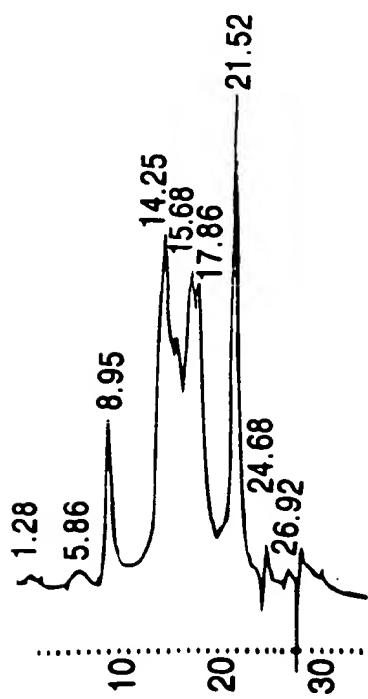


FIGURE 53D



FIGURE 53E

